

Soap

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1900



Thinking!

LEGISLATION, wars, competition, sources of supply—how many of these matters take up your time in worry and thinking?

In the all important matter of correct soap perfuming materials would you welcome the assistance of expert counsel, with unbiased recommendations, who have the ability to secure the *exact* perfuming materials which your finished goods require?

If so, you are thinking of Ungerer & Co. Our complete experience is at your command and merely awaits your orders to go into action for you.

If it's correct aromatic chemicals and essential oils you're thinking of—you're thinking of Ungerer.


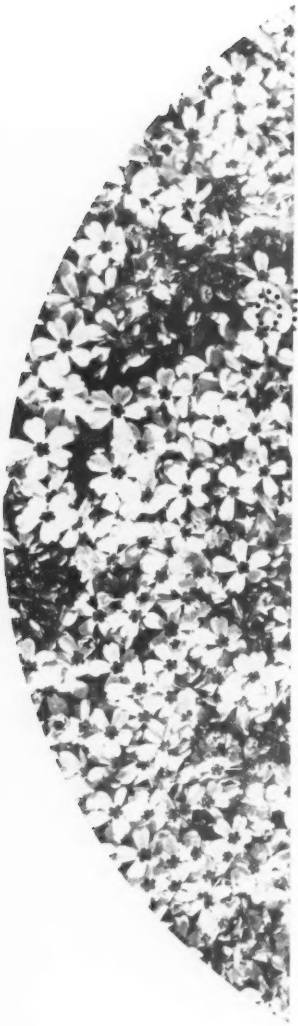
UNGERER & CO.

13-15 WEST 20th STREET

NEW YORK

and Sanitary Chemicals

Soap Perfumes



ODOR is perhaps the most important factor in the successful merchandising of toilet soaps. Competition being what it is today, the up-to-the-minute soap manufacturer is insisting on the very best possible perfume available, at a price within reasonable limits.

Our laboratories, based on the long experience of our suppliers Chuit Naef & Cie., Geneva, Switzerland, are turning out remarkably fine floral and bouquet odors for toilet soaps at surprisingly low figures.

Included in our most recent successful developments are GARDENIA, JASMIN, GERANIUM, LAVENDER, LILAC, FOUGERE, BOUVARDIA, MUGUET, ROSE, DAMASCENA, and numerous bouquet types.

Samples and Quotations on Request

Firmenich & Co., Inc.

135 FIFTH AVE., NEW YORK
CHICAGO OFFICE: 844 NORTH RUSH STREET

●



**With Quality
To Spare—This
Salesman
Cuts Loose With**

FULD'S SOAPS *and* CLEANERS

**FULD
MAKES IT FOR THE
LEADERS
IN
BULK
or packaged under
PRIVATE LABEL**

He'd tried selling the hard way with second string soaps and cleaners. Today he's got his second wind and moving into the lead armed with Fuld-made quality that can be demonstrated and prices that can be justified.

When a salesman picks up the pace of the Fuld-made Soap and Cleaner Line, it's no trouble getting names on the dotted lines.

*Selling
..faster
-1- ONLY!*

DEODORANT BLOCKS
LIQUID DEODORANTS
LIQUID CLEANERS
LIQUID SOAPS
OIL SOAPS
INSECTICIDES
DISINFECTANTS
SELF POLISHING WAXES
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Today's smart new containers are designed to produce more sales. Competition is forcing this change-over to better packages in every line of business.

Perhaps you are considering an improvement in your own line of metal containers. If so, Crown

is able to offer you an outstanding service. A staff of competent artists will be glad to render practical assistance.

Crown is winning a fast-growing patronage by helpful service, prompt deliveries and all-round quality in the finished containers.

CROWN CAN COMPANY, PHILADELPHIA, PA.

Division of Crown Cork and Seal Company

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FORT WAYNE NEBRASKA CITY

CROWN CAN

Soap

Volume XVI
Number 7

and Sanitary Chemicals

Reg. U. S. Pat. Office

JULY
1940

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Published by

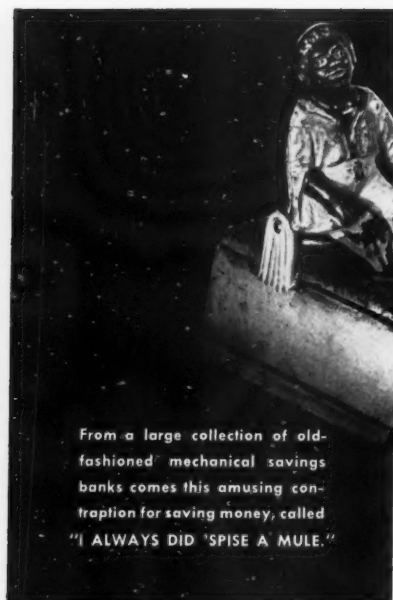
MAC NAIR-DORLAND COMPANY, INC.

254 WEST 31st STREET NEW YORK, N. Y.

Subscription rate, \$3.00 per year. Foreign, including Canadian, \$4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Reentered as second-class matter, Feb. 9, 1938, at Post Office, New York, under act of March 3, 1879. Mail circulation, May, 1940, issue, 4,170 copies. Total distribution, 4,500.

IT'S STEADY SAVING THAT COUNTS!

Temporary savings may sometimes be gained by "economy" buying of chemicals, but they are not to be compared with the steady savings that mount up when you are given fast, complete and economical service from a company of proven reliability. More and more manufacturers are realizing how Cyanamid's large scale, modernized resources—up-to-date laboratory facilities, highly trained technical staff, well stocked and conveniently situated warehouses—mean greater profits in *regular* savings. Let Cyanamid help you economize with top notch service on—



From a large collection of old-fashioned mechanical savings banks comes this amusing contraption for saving money, called "I ALWAYS DID 'SPISE A MULE."

TRI SODIUM PHOSPHATE

ALUMINUM SULPHATE

CAUSTIC SODA

SODA ASH

MURIATIC ACID

ZINC STEARATE

SULPHURIC ACID

**TETRA SODIUM PYROPHOSPHATE...K & M
MAGNESIUM OXIDE...AEROSOL* WETTING
AGENTS...WAXES**

*Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.



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DISTRICT OFFICES: 89 Broad St.; Boston, Mass.; 600 S. Delaware Ave., Philadelphia, Pa.; Russell and Bayard Sts., Baltimore, Md.; 822 W. Morehead St., Charlotte, N. C.; 860 Leader Bldg., Cleveland, Ohio; 20 N. Wacker Dr., Chicago, Ill.; 2006 Race St., Kalamazoo, Mich.; 1951 E. Ferry Ave., Detroit, Mich.; 1721 Arcade Bldg., St. Louis, Mo.

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Count on smart **CONTAINERS**
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to seize the right of way toward
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★ **Packaging by "National"**
combines practical
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..for **YOUR** line.. Packaged **"NATIONAL"**

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and

SUCH

THIXOTROPIC gels are peculiar beasts. All you do with such a gel is to stir it and, lo and behold, it turns to water. Let it stand again, and back comes the gel.

We in the potash soap field have something different to

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An expert hand is needed to solve these quirks.

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POTASH SOAPS

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as well as allied products such as

Coal Tar Disinfectants

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CLIFTON CHEMICAL CO., INC.

248 FRONT STREET

NEW YORK CITY



eye catcher

AN EYEFUL of color is your first compelling invitation to the customer in a store to consider your **PARA** or **NAPHTHALENE** product in preference to others. Follow up with pleasant and correct fragrance and the sale is clinched.

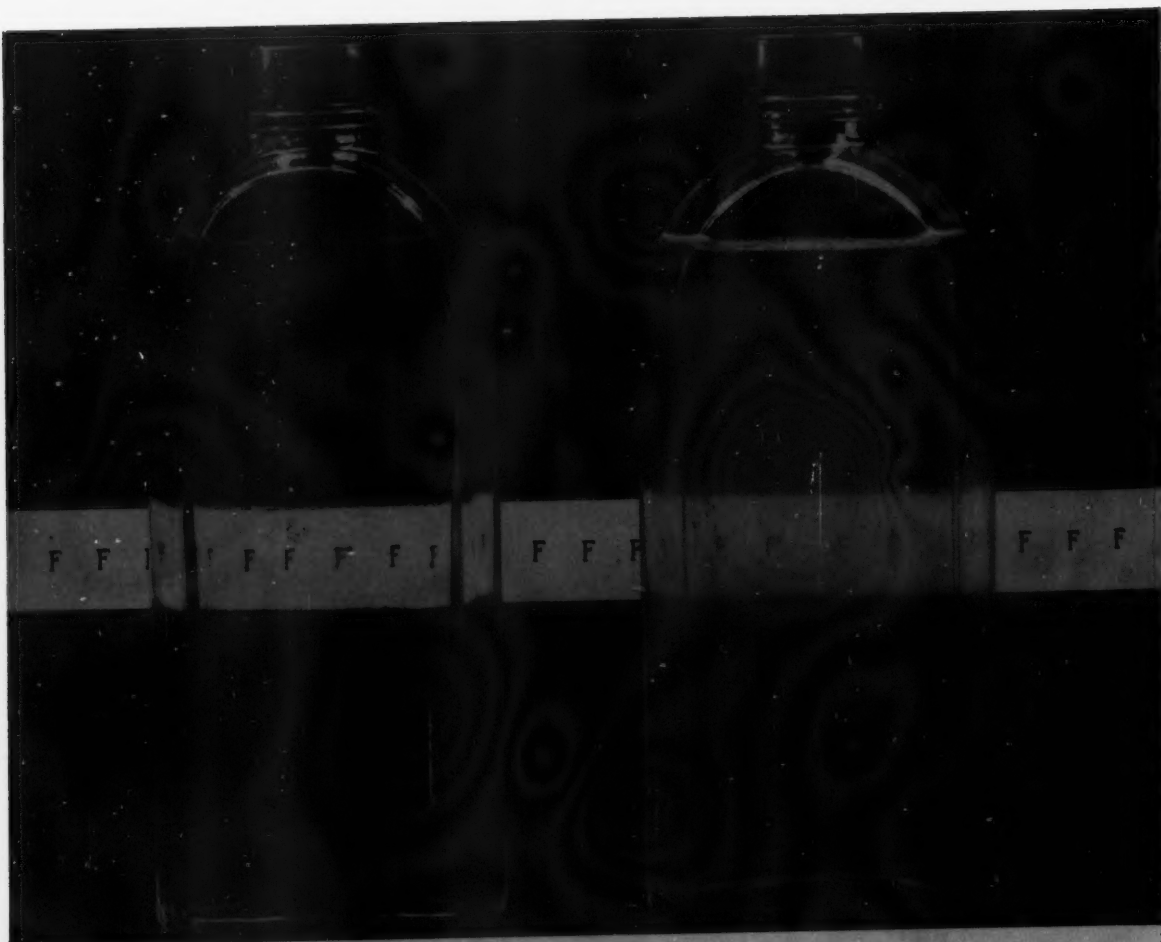
With Felton **COLOROMES**, you can be certain to produce fast-selling deodorant blocks and crystals. In one simple step, they economically add attractive color and fragrance which lasts until the final crystal has evaporated.

SEND TODAY FOR SAMPLES AND PRICE LIST! YOUR CHOICE OF 12 POPULAR ODORS AND COLORS!



FELTON
CHEMICAL COMPANY, INC.
603 Johnson Ave., Brooklyn, N. Y.
Stocks in Principal Cities

Felton Quality..... the Quality that Sells



WHY AQUAROMES ARE OUTSTANDING WATER SOLUBLE PERFUME OILS

Note how clear the water solution of Felton **AQUAROMES** on the left is in comparison with ordinary water soluble perfume oils. **AQUAROMES** are completely soluble, and as you see, leave no trace of oil film or cloudiness.

You can use **AQUAROMES** to economically and attractively perfume a large variety of products such as Liquid Shampoos, Liquid Soaps, Theatre Sprays, Deodorant Sprays and Formaldehyde Sprays . . . in fact any product using water as a base.

There are a large number of popular fragrances

. . . and a correct one for exactly the type of product you wish to perfume to best advantage.

**WRITE TODAY
FOR SAMPLE!**



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CHEMICAL COMPANY, INC.
603 Johnson Ave., Brooklyn, N. Y.

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PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

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Montreal, Que., Canada
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Toronto, Ont., Canada
218 Front St., West

Build **4** Business on Quality Lines...

4 Liquid Floor Soaps

TO MEET YOUR CUSTOMERS' DEMANDS



4 FOR RUBBER FLOORS

The following Davies-Young Floor Soaps are approved by the Rubber Manufacturers' Association, Inc.:

BUCKEYE PLAIN LIQUID SCRUBBING SOAP

BUCKEYE SASSAFRAS LIQUID SCRUBBING SOAP

BUCKEYE WAX CLEANER

BUCKEYE SPECIAL RUBBER CLEANER

**THE DAVIES-YOUNG SOAP CO.,
DAYTON, OHIO**

SOAPS FOR EVERY PURPOSE; FLOOR
WAXES, SANITARY SUPPLIES

Copyright 1939, The Davies-Young Soap Co.

Liquid floor soaps (scrubbing soaps) are widely used today because of their ease of handling, immediate and complete solubility in water, and effective cleaning properties. The several Davies-Young soaps are each specifically compounded for certain types of floors. (Buildings having more than one type of flooring often require several different cleaners to maintain them properly and economically.) Build up your business by recommending and selling the right cleaner for the right surface.

MAIL TODAY FOR SAMPLES AND PRICES

The Davies-Young Soap Co.
Dayton, Ohio

Please mail samples and prices of your Liquid Scrubbing Soaps.

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Try

Lavender	Y 2665
Lilac	3384
Carnation	2586
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Type R	

AROMATICS VERONA

Will assure you of natural purity. Favorable cost position. Are you acquainted with:

Ionones Verona

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Requests for samples on your firm's letter-head will be promptly answered.

AROMATICS DIVISION GENERAL DRUG COMPANY

170 Varick St., New York

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Consider These Features For Your Bath Crystal Base!



SOLVAY
Snowflake Crystals



SNOWFLAKE

has all these ...



As the perfect bath crystal base, Snowflake Crystals offers you all these unusual advantages . . . features which are advantageous in other cleanser products as well:

1. Beautiful crystalline appearance.
2. Effective water softening properties.
3. Ready solubility.
4. Stability, characterized by non-caking and unchanged chemical composition or physical appearance.
5. Mildness—non-irritating to the skin.
6. Detergent properties—aids the soap.
7. Readily absorbs dyes.
8. Excellent vehicle for perfumes.
9. Free flowing properties which make it ideal for use in machines.
10. Low cost.



. . . Now there's the perfect bath crystal base for you. Remember, Snowflake *softens* the water, *does not harden it*. Write for complete information today.

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 RECTOR STREET NEW YORK, N. Y.

SOLVAY SALES CORPORATION • 40 Rector Street, New York, N. Y.

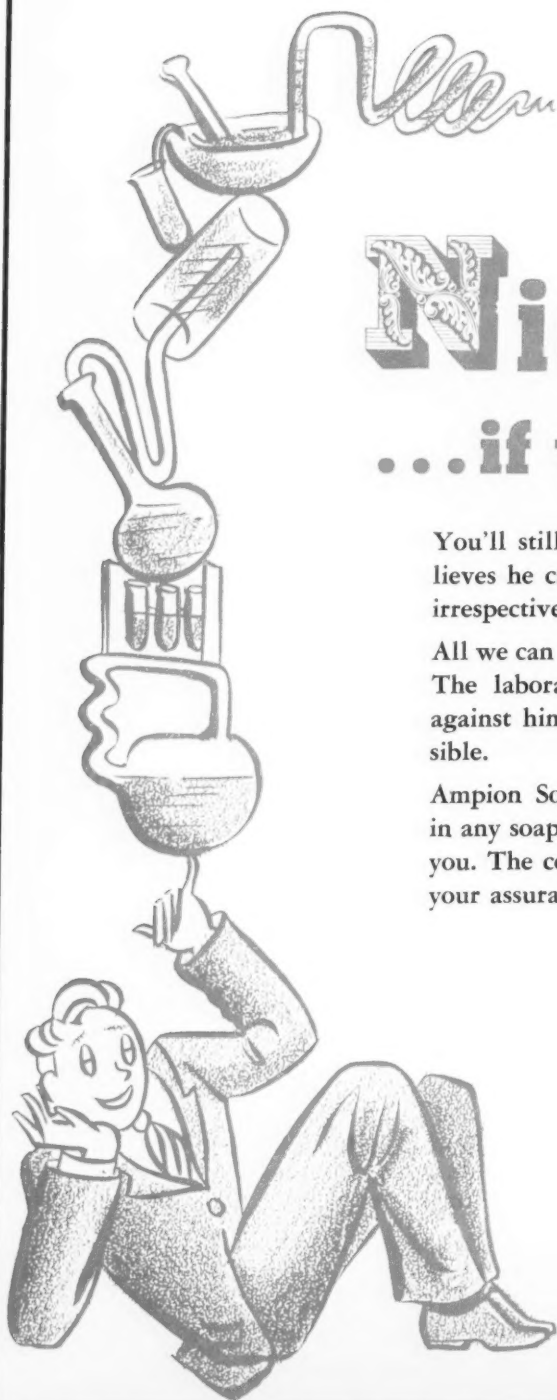
Gentlemen: Kindly send me a copy of the Solvay Products Book.

Name.....

Affiliated with.....

Address.....

City.....State.....AJ-740



Nice Trick ...if you can do it!

You'll still occasionally find a man who honestly believes he can get top performance from soap products irrespective of the quality.

All we can say to him is, "Nice trick—if you can do it!" The laboratory facts, the real hard-boiled facts are against him and anyone else who attempts the impossible.

Ampion Soap Products offer uniform high efficiency in any soap product you want at prices that will please you. The constant high quality of Ampion Products is your assurance of satisfied customers who will reorder.

PRODUCTS

Liquid Soap Dispensers	Insecticides
Liquid Soaps and Bases	Waxes and Polishes
Oils, Soaps and Liquids	Deodorizing Blocks
Disinfectants	Containers
And Allied Products	

AMPION CORPORATION
4-88 FORTY SEVENTH AVE.
LONG ISLAND CITY, N. Y.

DETERGENT MANUFACTURERS

Here's the evidence . . . !



As clearly as possible, without attaching a sample of DIAMOND GRADE TETRASODIUM PYROPHOSPHATE to the page, these unretouched photomicrographs (actual size and six times enlarged), show why this General Chemical Company compound is especially advantageous for use in detergent mixtures.



HERE ARE A FEW POINTERS ON WHY TETRASODIUM PYROPHOSPHATE IS AN EXCELLENT CLEANSER INGREDIENT

1. It removes dirt quickly and holds it in suspension.
2. It prevents formation of "rings."
3. It helps when used with soaps to build more abundant suds.
4. It is an extremely effective agent for keeping iron salts in solution—washes white clothes really white, colored clothes their true color.
5. It is an ideal ingredient for preventing scale in cleansing mixtures for machine, mechanical dish and bottle washers.

Fill in the coupon now for additional information on General Chemical Tetrasodium Pyrophosphate, Anhydrous, Diamond Grade.

GENERAL CHEMICAL
Diamond Grade
TETRASODIUM PYROPHOSPHATE
 ANHYDROUS

① GRADED FOR UNIFORM PARTICLE SIZE

Manufacturers of detergent mixtures realize that Diamond Grade's small thin flakes—made just the right size—help keep other ingredients from settling in the package and aid in giving detergent compounds a uniform mix.

② RIGHT PARTICLE SIZE AND STRUCTURE SPEEDS DISSOLVING

Because Diamond Grade particles are uniform they dissolve evenly—and because of their porous nature they dissolve rapidly.

③ DOES NOT "BUNCH-UP"

An additional advantage of Diamond Grade Tetrasodium Pyrophosphate is that, due to its unique physical form, it does not "bunch-up" when the compound is poured into water.

GENERAL CHEMICAL COMPANY

40 RECTOR STREET, NEW YORK, N. Y.

GENERAL CHEMICAL COMPANY

40 Rector Street, New York, N. Y.

Gentlemen: Please send me additional information on grades of General Chemical Tetrasodium Pyrophosphate.

Name.....

Company.....

Street.....

City.....

State.....

Manufacturer.....

Repacker.....

S-740

Distinctly better

Our longer and more complete experience as perfumers to the soap making industry, has enabled us to create perfumes that are *distinctly better* for this particular use.

Our staff fully understands the limitations and requirements of this particular phase of perfumery.

Let us submit suggestions for your soaps that are better in odor value, better in dollar value and better in consumer appeal.



VAN AMERINGEN-
HAEBLER, INC.

315 Fourth Avenue, New York City

HYSAN IS YOUR FLOOR TREATMENT HEADQUARTERS



SUPERIOR SANITARY
PRODUCTS FOR
PROGRESSIVE JOBBERS



HYSOLENE

cleans waxed floors **SAFELY**. An ideal maintenance material. Used concentrated, its approved emulsifiers remove old wax quickly. A best seller. Sample shows why. Use coupon.

GYM FINISH

Schools, athletic clubs, etc., favor Hysan's **GYM FINISH** because it stands up under abuse and friction. Won't cause rubber burn. Produces hard, non-slip film. Easy to keep clean. Sample free.

HYPER-WAX

HYPER-WAX is the heavy duty wax that gives higher lustre with **one coat**. Stands more washings. Self leveling. Gives a hard, tough, yet pliable surface. Offers Rubber Mfrs. Ass'n's O.K. Private label at no extra cost.

AUTOMATIC WAX APPLICATOR

This applicator (patented) applies wax and other floor treatments in half the time. Gives more coverage, spreads better. Folder, sales plan free.



TERRAZZO SEAL

Our super quality **TERRAZZO SEAL** gives positive protection against stains, discoloration, etc. Makes surfaces impervious to ink, oil, grease, water, medicines.

HYSAN'S WOOD SEAL

goes deeper into the pores. Produces a longer lasting waterproof surface which is hard, yet non-slippery. It prevents splintering, warping and discoloration.

**CLEANERS • DISINFECTANTS • SOAPS • DEODORANTS •
DEODORANT BLOCKS • INSECTICIDES • POLISHES • WAXES**

HYSAN makes the **COMPLETE** line of quality floor treatments—and ships them **faster**.

HYSAN gives you better looking labels and packages, more new items—more **SERVICE**.

MAIL COUPON for SAMPLES



HYSAN PRODUCTS COMPANY • 2560 ARMITAGE AVENUE • CHICAGO, ILL.

HYSAN, 2560 Armitage Ave., Chicago
Send Samples, Data and Prices.

☐ HYPER-WAX ☐ TERRAZZO SEAL
☐ HYSOLENE ☐ GYM FINISH
☐ APPLICATOR ☐ WOOD SEAL

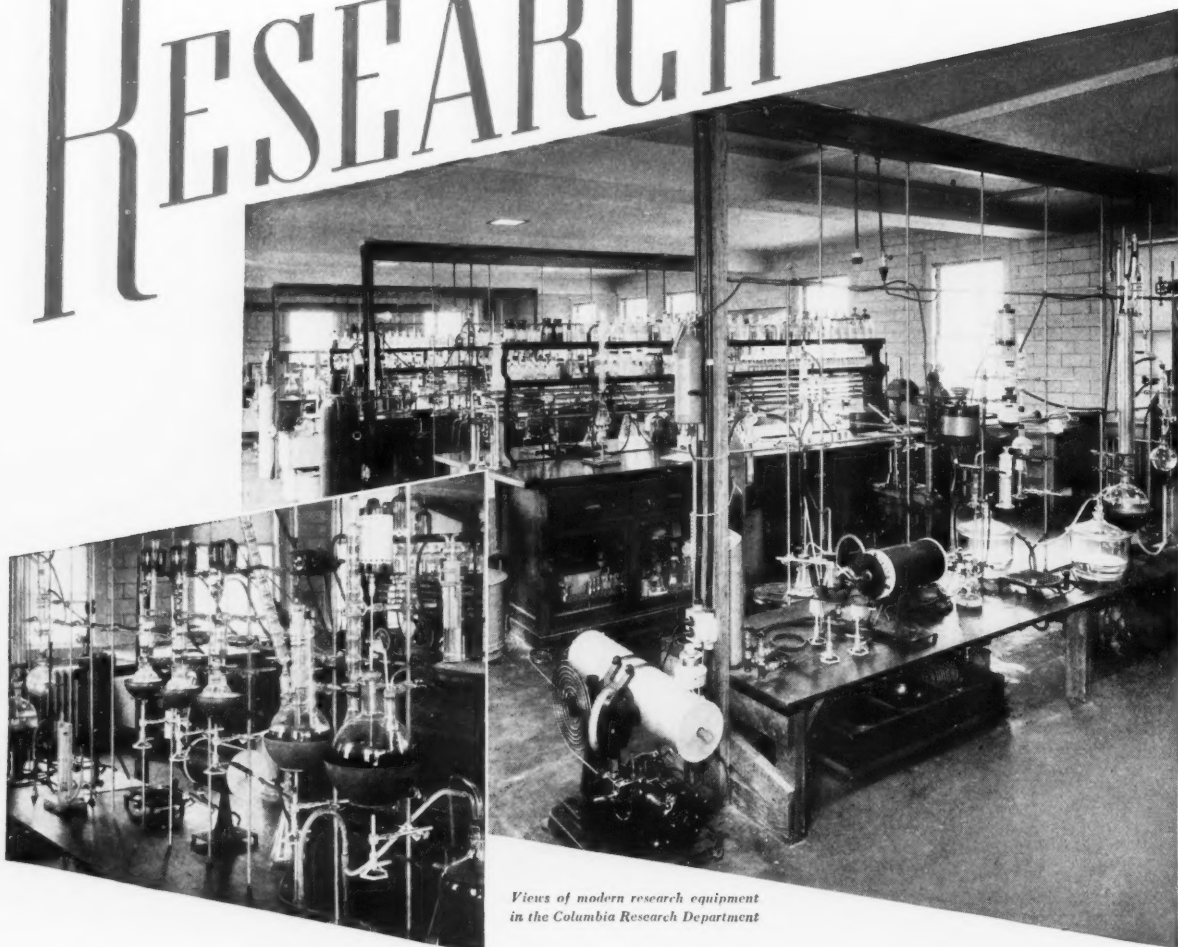
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CITY **CHICAGO** By **DAHS**

S/7/40

RESEARCH



*Views of modern research equipment
in the Columbia Research Department*

ARE YOU ENJOYING THIS MODERN SERVICE FROM YOUR PRODUCER?

Someone has called the research laboratory the heart of a chemical plant. You can avail your company of the developments of the COLUMBIA Research Staff and the facilities of a modern laboratory second to none in the alkali industry.

Outstanding examples of the service

COLUMBIA Research is rendering are the development of a new high quality liquid caustic soda to better meet the demands of manufacturing processes, and COLUMBIA No. 5 Caustic Resistant Paint, which insures freedom of contamination of both 50% and 73% Liquid Caustic in transit and storage.

COLUMBIA

SODA ASH
CAUSTIC SODA
SODIUM BICARBONATE
MODIFIED SODAS
LIQUID CHLORINE
CALCIUM CHLORIDE

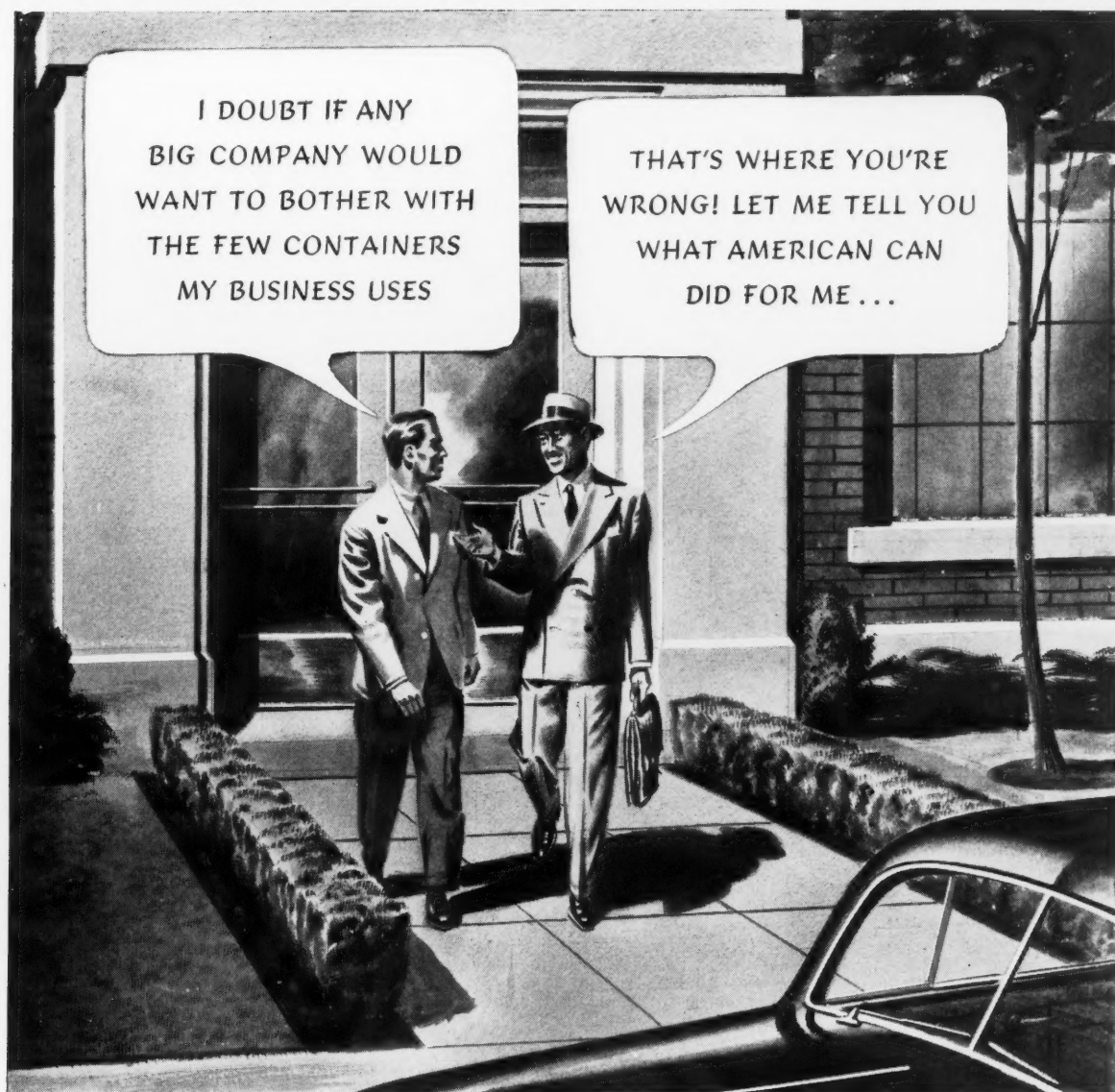


THE COLUMBIA ALKALI CORPORATION

EXECUTIVE SALES OFFICES: 30 ROCKEFELLER PLAZA, NEW YORK, N. Y.

Plant Barborton, Ohio

CHICAGO • BOSTON • ST. LOUIS • PITTSBURGH • CINCINNATI • CLEVELAND • MINNEAPOLIS • PHILADELPHIA



I was a little fellow, too. But American Can Company *wanted* my business. They not only *wanted* it but they wanted it *enough* to help me lay out my plant to save money on packaging. They even helped me decide what type of container was best for my use. That was 10 years ago. Now I've grown to be a pretty fair customer. I'm strong for the service you get from American Can Company."

PACKAGING PROBLEM? Call in American Can Company.



AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.
104 SO. MICHIGAN AVE., CHICAGO • 111 SUTTER ST., SAN FRANCISCO

DU PONT TETRA SODIUM PYROPHOSPHATE

Prevents Scum Formation



After several minutes, the solutions were poured out and each pan given a thorough rinse with warm water. The pan on the right still carried a sticky "ring", soap scum which did not rinse off. On the left, the pan which contained DU PONT T. S. P. P. had no "ring" formed and rinsed perfectly clean.

In each pan were placed equal amounts of hard water at 120° F. Enough soap was added to each until suds covered the surface of the water. In addition 0.1% Du Pont T. S. P. P. was added to the pan on the left. One teaspoonful of melted butter colored with a red dye was stirred into each solution and the solutions stirred briskly for several minutes. In the pan on the right, the grease killed the suds, clung tenaciously to the sides in a sticky "ring" and floated on the surface as a scum. On the left with T. S. P. P. added suds were still active, the grease was thoroughly emulsified throughout the solution and there was no evidence of scum formation.



One of the many useful services performed by Du Pont Tetra Sodium Pyrophosphate as a detergent is the prevention of soap scum in dishwashing and laundering operations. As a water softener, Tetra Sodium Pyrophosphate represses the formation of sticky, insoluble hard water soaps which form the base of scum. As an emulsifier, it breaks up grease and dirt aggregate into smaller particles, suspends them throughout the body of the solution, and prevents them from rising to the surface.

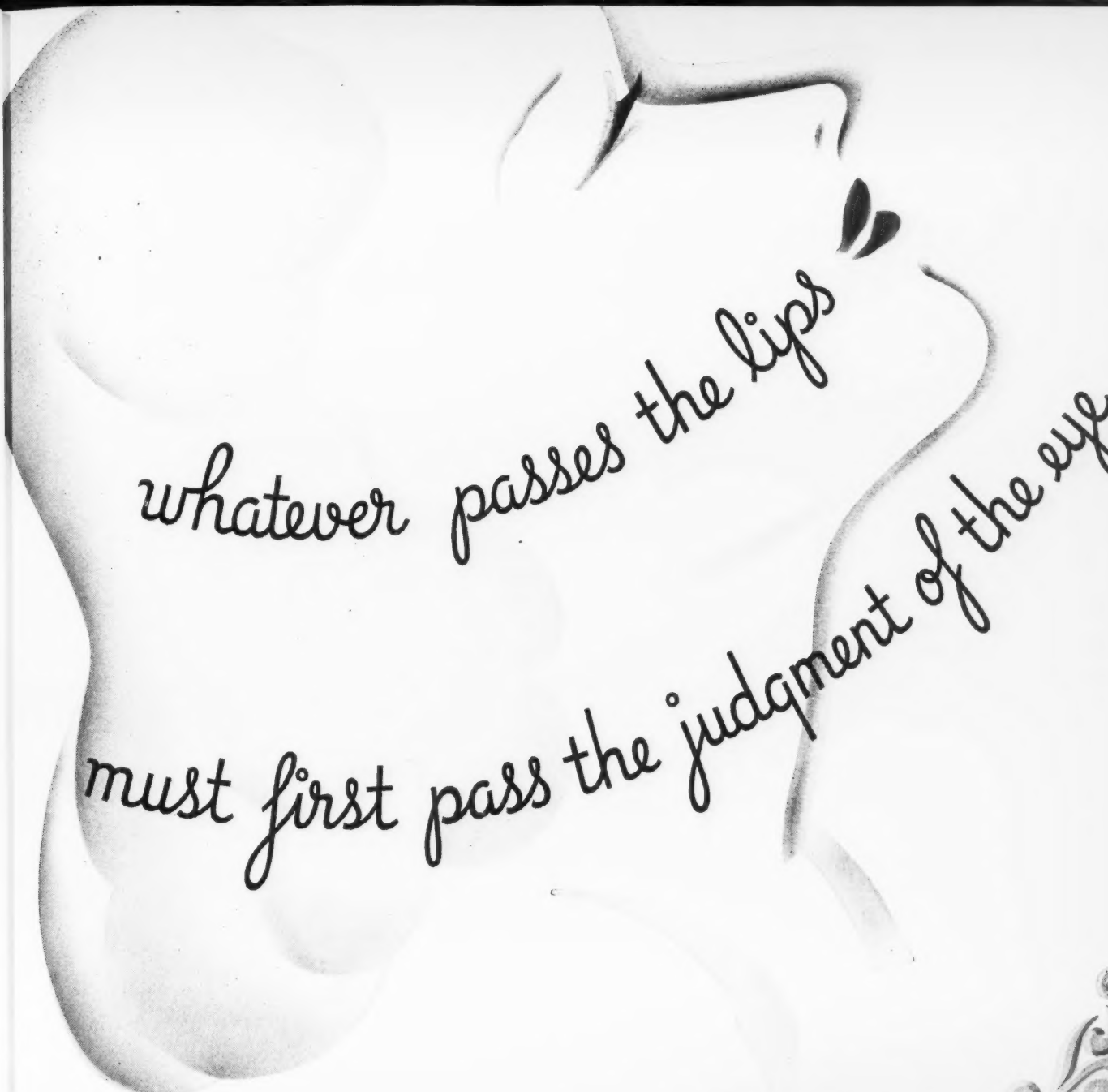
Because of this action by Du Pont T. S. P. P., unsightly "rings" do not form on the sides of containers or on the objects being washed. Rinsability is improved and the objects are cleaner, brighter and more lustrous.

Include Du Pont T. S. P. P. in your soaps and cleaning compounds. Let us also quote you on T. S. P., Sodium Silicate, Sodium Metasilicate, Caustic Soda, Soda Ash, and other chemicals.



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
GRASSELLI CHEMICALS DEPARTMENT
WILMINGTON, DELAWARE

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New Haven • New Orleans • New York • Philadelphia • Pittsburgh • Rensselaer • San Francisco • St. Louis • St. Paul
Represented in Canada by CANADIAN INDUSTRIES, LTD., General Chemicals Division, Montreal and Toronto



*whatever passes the lips
must first pass the judgment of the eye*

Quality in packaging . . . that keeps faith with the product's integrity . . . secures preference inspired by confidence. Our unlimited facilities and long experience in a complete packaging service enable us to render valuable assistance with regard to containers, closures and cartons for hygienic and pharmaceutical products. Owens-Illinois Glass Company, Toledo.

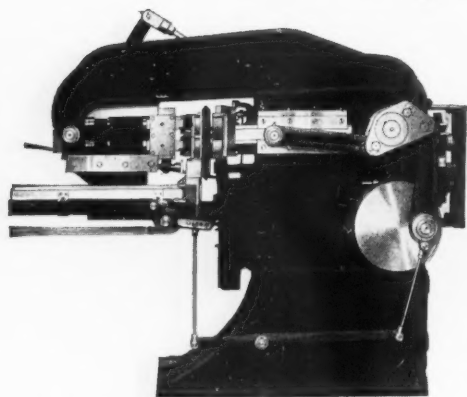
OWENS ILLINOIS

Complete Packaging Service

GLASS CONTAINERS—CLOSURES—SHIPPING CARTONS



*to
avoid cakes that crack
and other undesirable results
due to poor pressing, install*



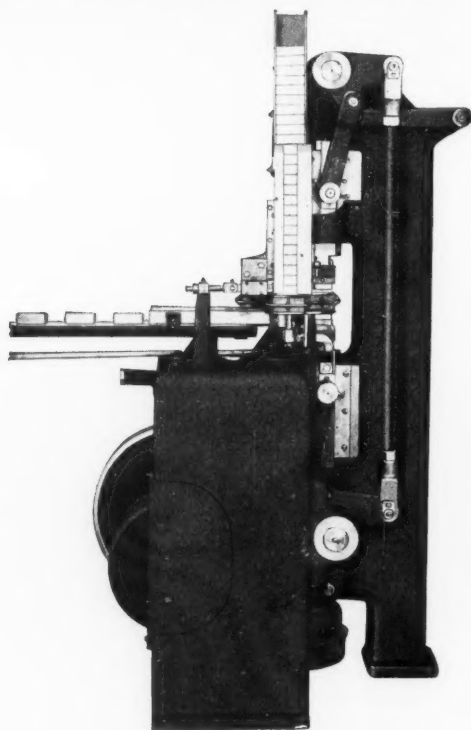
Type K Laundry Soap Toggle Press

JONES TOGGLE MOTION SOAP PRESSES

Soap cakes that are stamped — not pressed — that are formed by a sudden blow rather than a slow squeeze are apt to crack in use.

The long slow squeeze of Jones Toggle presses gives soap stock time to coalesce into solid cakes that wear away in use without cracking.

Toggle presses also produce a finish and create a desire for possession never achieved by any other means.



Type ET Toilet Soap Toggle Press

R. A. JONES & COMPANY, Inc.
P. O. BOX 485

CINCINNATI, OHIO

The Standardized Constant Motion Cartoner packages, bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds and inserts direction sheets and corrugated board liners with the loads.

As the Editor sees it..

IN view of the defense problem which is presented by the Philippines in a world at war, a rather pertinent suggestion has been made by a well-known soaper. He feels that the present three-cent excise tax on coconut oil which is being turned back to the Philippine Government, should be added to our own defense funds and at least help to reduce the tax bill of the nation by a few million dollars. The point appears to be well taken. But in the present hysterical frame of mind in which most of official Washington appears to find itself in the matter of national defense, we fear that the few million dollars in question would hardly receive passing notice. Anything less than a billion is distinctly declassé in Washington today.



WHY is it that some manufacturers of laundry soap products will not print warnings on their labels against the use of soaps for washing woolens and silks which are not fitted for the purpose? Why is the laudatory verbiage always present on labels, but the practical information which the consumer should have, so frequently omitted? These questions were posed to us by a representative of the "New York Herald Tribune Home Institute" recently, and we believe give a true consumer slant on package directions for soap chips, powders, and the like.

For a label on a package of highly filled soap chips to tell what a wonderful product it is, and then upon use to shrink a wool

sweater to half size, is somewhat incongruous to say the least. If the product is not designed for washing woolens, why not print a warning to this effect on the package, and avoid making a bad friend? "Warning: This product should not be used for washing woolens, silks, or other fine fabrics. For such purposes, use So-and-So Brand" We feel that such a warning is far less damaging than to permit any number of consumers to ruin their fabrics and damn the product forevermore. To us, it appears to be a very practical and sensible suggestion which might well receive the consideration of a number of soap manufacturers.



A WIDE increase in damage suits for bodily injuries allegedly caused by one product or another has been a development of recent years. Newspaper reports of successful actions against manufacturers have tended to encourage a multiplicity of these suits which a decade or so ago would have been summarily tossed out of court. But today, the attitude of government and courts is different. The trend is to give wider protection to the rights of the injured,—and it is a trend which has opened wide this door of legal blackjackery to the crook and faker.

In collusion with lawyers and physicians of questionable character, there is little to impede excessive or fraudulent suits by dishonest litigants. It has been our belief for some time that nine out of ten product injury suits are in whole or in part outright

frauds. But there is no way today to keep them out of court, or to save a manufacturer from the expense of defending any number of them. Nothing short of legislative action in various states can correct the situation, and the ever growing number of these cases indicates that some such action is needed to make this quest of easy money by crooks and their lawyers an unsafe pastime.



EVERY time one of the big soap companies issues an earnings statement, at least a dozen new people rush into our office and express their ardent wish to get into the soap business as quickly and as painlessly as possible. Not only do sundry individuals crave to dip their ladles into the soap industry gravy dish, but any number of financial organizations get the idea that soap must be a pretty good business to be in. So accordingly, they hire an advertising agency or some other agency to make for them a "survey" of the soap industry. This is to include how much soap everybody makes, what kinds of each and where they sell it, and for what price,—and what the profit is.

Now the disconcerting part of this whole thing is that these survey fellows invariably pick on us as a quick and ready source of information. After months and months of this, it is no wonder that we attain a degree of homicidal heat whenever anybody comes in and tells us that they are making a survey and they would like us to tell them this and that and those. We now suggest bluntly that if they want to find out how much soap Schmaltz & Co. sell, why not ask Schmaltz. This answer never seems to make a hit. And when we mention the fact that we would not tell them even if we knew, this never makes a hit either. But still they come, all of them feelers for outfits which crave to break into the big profits which they just know go hand in hand with soap manufacture.

So, Mr. Soaper, take warning,—the "sur-

veyors" are out to find how you make your money and why they can't make some the same easy way.



DURING 1940, something like sixty thousand tons of fatty acids will be manufactured in Germany by the oxidation of paraffins. This anticipated output will show an increase of fifty per cent over the production for 1939. The acute scarcity of natural fats in Germany is, of course, the prime factor. Such oils and fats as are available must, of necessity, go for food uses. Soapers must struggle along with what they can get in the way of fat raw materials, leaning more heavily on substitutes and fillers. And judging from such meagre information as is available from the Reich, the resulting soaps are a lot better than might be expected.

On the other hand, the commercial development of fatty acids from petroleum in the United States has not made any great apparent progress over the past several years. Faced with a sufficiency of natural fats at low prices, a stagnation in synthetic fatty acid development is not to be unexpected. There seems to be little, if any, reason economically why they should be produced here today. And as far as we can find out, those soapers who have tried them, find that they are far from satisfactory compared with fatty acids from natural sources. With the great natural fat producing capacity of the United States, there is little likelihood that fatty acid synthesis would ever have the opportunity to play a role which it is playing in Germany today.

An illustrated discussion of the technique of fatty acid synthesis and refining now in use in Germany has been prepared for publication in a series of two articles by Dr. F. Wittka of Zurich, Switzerland, the first of which will appear in the August issue of "Soap and Sanitary Chemicals." Numerous interesting details of the processes used are revealed.



The RESTAURANT MARKET *for Cleaning Materials*

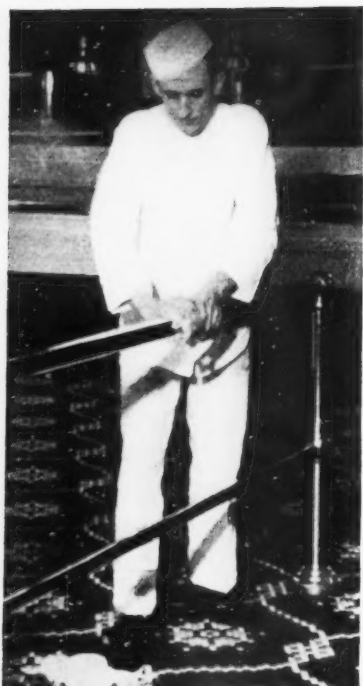
THE importance of maintaining high standards of cleanliness in places where food is sold for consumption on the premises should make this field an even larger market for cleaning materials and sanitary products than it is today. That it is a market of considerable extent, is indicated by the fact that restaurants, cafeterias, lunch rooms, lunch counters and refreshment stands throughout the United States do an annual business volume of approximately one and two-thirds billion dollars and spend more than eleven million dollars a year on cleaning and sanitation materials. Since cleanliness is so essential in attracting and holding customers, and so necessary in the prevention of waste through food spoilage, it is somewhat revealing to say the least, that the share spent on sanitary products by establishments selling food and refreshments is

quite a bit less than one per cent of their total income.

This means that an average restaurant doing a business of ten thousand dollars a year spends less than a hundred dollars on soap powders, cleansers, dishwashing compounds and the like. When put into these terms, it is obviously seen that this field might well become an appreciably larger market for cleaning materials than it is at present. According to figures of the U. S. Department of Commerce, there are some 153,000 establishments serving food in the United States, with 26,500 of these accounting for 76 per cent of the sales. A clue to the location of the profitable markets is shown by the fact that 37 cities of over 250,000 population have 29 per cent of the total restaurant units and do 45 per cent of the total business.

So much for the statistics. It is only natural, however, that the

large restaurants in the big cities should be more conscious of the desirability of sanitation than the average run-of-the-mill eating houses spread over the countryside. Even so, except in comparatively rare instances, it has been found through a survey made by a representative of *Soap and Sanitary Chemicals* that buyers of cleaning materials for restaurants are not particularly well informed on the subject of sanitation. They conduct their buying generally on a hit or miss basis, knowing little of the reasons why one cleaning compound is any better adapted to their particular cleaning problem than another. They are usually unaware of the composition of the products they use and why they use them in preference to other products which might prove to be more satisfactory or more economical. Operating as they do on a comparatively small scale without facilities for



checking new materials before they are put into use, most stewards and buyers for eating places must rely on the recommendations of the firms and salesmen from whom they buy. Thus sanitation in many restaurants is often a matter of personal preference on the part of the management and is regarded as a more or less necessary evil.

"Sure, when the place gets dirty, we clean it, that's all," said the manager of a small side street restaurant belligerently when interviewed. All too often this was found to be the practice in the "greasy spoon" type of restaurant. With no regular routine of thorough cleaning programs, these places are cleaned only superficially and a minimum of cleaning products is used in the process. It is this type of lunchroom that is undoubtedly responsible for the average low percentage of income which is spent on cleaning and sanitary products. Fortunately, the tendency toward greater strictness on the part of the health officers in many localities today should do a great deal to increase the use of sanitary products in the thousands of little "beaneries" and lunch wagons in the United States.

In these small restaurants,

dishes and glasses are still being washed by hand where the business is not large enough to warrant the installation of mechanical dishwashing and sterilizing equipment. However, in restaurants of larger size, hand dishwashing is fast becoming obsolete although washing glassware by hand is still a common practice. Sterilization of glasses is supposedly required by law in practically all communities covered by the survey. Steam and hot water are the usual agents, but the actual "sterilizing" is generally more theoretical than real.

By far the most widely used and important cleaning products employed in the larger independent restaurants today belong to that group of products classed as dishwashing compounds. These compounds are, as a rule, purchased a barrel at a time by the restaurant steward from janitor supply houses or local manufacturers. Depending on the size of the restaurant, from 100 to 400 pounds of dishwashing compound are used each month. A great many of these compounds packaged under a variety of trade names were found in dishwashing departments and storerooms of restaurants visited during the survey. When the buyers were questioned as to the ingredients making up the compound used by their unit, they had to confess that they had only a very hazy idea of composition. Each buyer, nevertheless, was highly enthusiastic about the merits of his favorite brand.—declaring emphatically that the compound he used was the best one on the market—even though he didn't know what was in it. Even a jobber selling one particular compound to restaurants was not quite certain what went into his product. He said he thought that the compound consisted mainly of soda ash with some trisodium phosphate, a small percentage of ammonia and possibly a little bicarbonate, although he wasn't very sure about this last item.

Two types of dishwashing machines were found to predominate in the restaurant field. The "drip"

type, popular in the metropolitan New York area, has a small reservoir on top of the machine. Dishwashing powder is added to this reservoir, three or four cupfuls a day according to one steward who said that he used one 325-pound barrel every two and a half months. Water dripping slowly into the reservoir maintains a saturated solution which overflows into the compartment where the dishes are washed. As the compound is used up, more is added. As the rate of flow can be adjusted until the most satisfactory rate is found, this type of machine is said to be economical. The cost of these compounds was found to range between 6 cents to 15 cents a pound with an average cost of approximately 10 cents a pound.

Another type of product used in dishwashing machines is the "brick" or "bricquet." While these have their supporters and answer the purpose in some cases, these are apparently not as popular as the powders in the area surveyed. Used in a similar manner, they are placed in a stream of water entering the machine, and slowly dissolve.

For washing dishes in the larger restaurants, soap powders, as such, seem to be used less frequently. They have been replaced largely by the non-soap compounds. It is a common practice for some chefs in restaurants to save the fats and greases left over from cooking. In this way, seventy-five to a hundred pounds of fatty leavings may be accumulated each week and these are either traded in for cleaning powders or sold for cash to pick-up trucks of renderers or soapers. The chef of a New York restaurant stated that he used 400 pounds of soap powder per month. The soap powder manufacturer, he said, collected the refuse greases every week, leaving in exchange a proportionate amount of yellow soap powder.

SOAPS find their chief place in the cleaning of floors and woodwork in restaurants. Practically every large independent restaurant covered in the survey used

soaps in some form for cleaning floors, the quantities used varying from 100 pounds every three months to 500 pounds a month. The selection of cleaning products has a great deal to do with the individual problem of the restaurant. In a hotel restaurant in the Herald Square district of New York, the steward said: "Tile floors in the kitchen proved to be a safety hazard with one type of cleaner that left them slippery after each of our daily cleanings. Our need was for a cleaner that not only removed grease but also left the surface with all its natural abrasive quality. Various cleaners were tried without satisfaction. An insurance company safety man recommended one type but a trial showed that it left the floors gritty and unpleasant to walk upon. Moreover a certain amount of this grit was tracked from the kitchen onto the waxed floors of the dining room. After numerous trials we finally settled on the cleaner we use in our dishwashing machine."

This was found to be a common experience in many restaurants with tile or terrazzo floors. Restaurants are commonly partial to compounds which have for their basic component trisodium phosphate. They do a more effective job, the restaurant people say, in cleaning hard surfaces which are not affected by strong detergents. One of the main advantages claimed for them in the restaurant field is that no scum or streaks are left on floors and walls that have been cleaned with them.

A steward speaking of soaps for cleaning floors raised the following objection to soap powders. He said, "When we cleaned our floors with one soap powder we noticed a tendency for white streaks to appear on the floor after the floors had dried. Liquid floor scrub soaps were found to be an improvement as white marks no longer appeared. These in particular had the further advantage of containing a small amount of pine oil, leaving a pleasant odor after it has been used. "This same steward said that he used 30 gallons of no-rubbing floor wax every month and about four gallons of metal polish.

He was unable to say how much disinfectant he used but said he used 'a lot'.

After restaurants close for the night is the usual time for the clean-up crew to go into action. It is frequently an all-night job for two to four men to clean a large restaurant thoroughly, getting it ready for the next day. Through the early hours until dawn most restaurants are swept out, scrubbed and polished every night of the year.

All restaurants and bars in New York and some other cities are required to rinse all glassware after it has been washed with water at a temperature of 180° or higher. Judging from the comments of bartenders and stewards, straight trisodium phosphate is the most effective material for washing glassware. "These crystals," (he did not know what they were) said a bartender in a Broadway restaurant-bar, "are the best thing I've found for washing glasses. Look how my glasses shine, although, confidentially, the secret is all in knowing how to dry them. I always use two towels, one for drying and one for polishing." He added that he used an ounce to an ounce and a half of "crystals" to a gallon of water to make his cleaning solution. Others reported that they used white soap flakes, soap powders and chlorine powders for cleaning glassware. The majority of stewards in the better class restaurants stated that they were strongly in favor of more stringent health regulations, especially in dishwashing.

Results were judged to be the most important of the determining factors in the selection of cleaning products, it was found, although, of course, price also plays a big part in governing the buyer's choice. Satisfaction and service from the supply companies and manufacturers was a factor mentioned by several stewards in the course of the survey.

These were found to be some of the questions which a buyer asks when purchasing a cleaning product: Can it be used for several different purposes? Is the package of a convenient size for use and storage? Does

it contain as much for the money as a competitive package? Does it work fast without staining or injuring the surface cleaned? Is it hard on workers' hands? Can it be purchased on short notice? Does it leave an offensive odor? All of these questions are of prime importance in the restaurant field and must be answered satisfactorily before the buyer shows by his reorders that he is interested in using the product.

THE matter of insect control was discussed and found to be left to professional exterminators in the majority of restaurants. As one steward explained it: "Professional exterminators are employed because these men have had years of experience in knowing where to look for insect life and how to apply insecticides safely and effectively. Our own employees might be trained to do this work properly but it would take considerable time. Then too, we don't like to have an employee handle poisons and also food. Accidents are always possible. Any sickness caused to a patron through eating food containing an insecticide would not only be regretted for his sake, but cases of this sort could ruin the reputation and business of a restaurant. That is why we patronize professional exterminators and send for them when

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SOAP

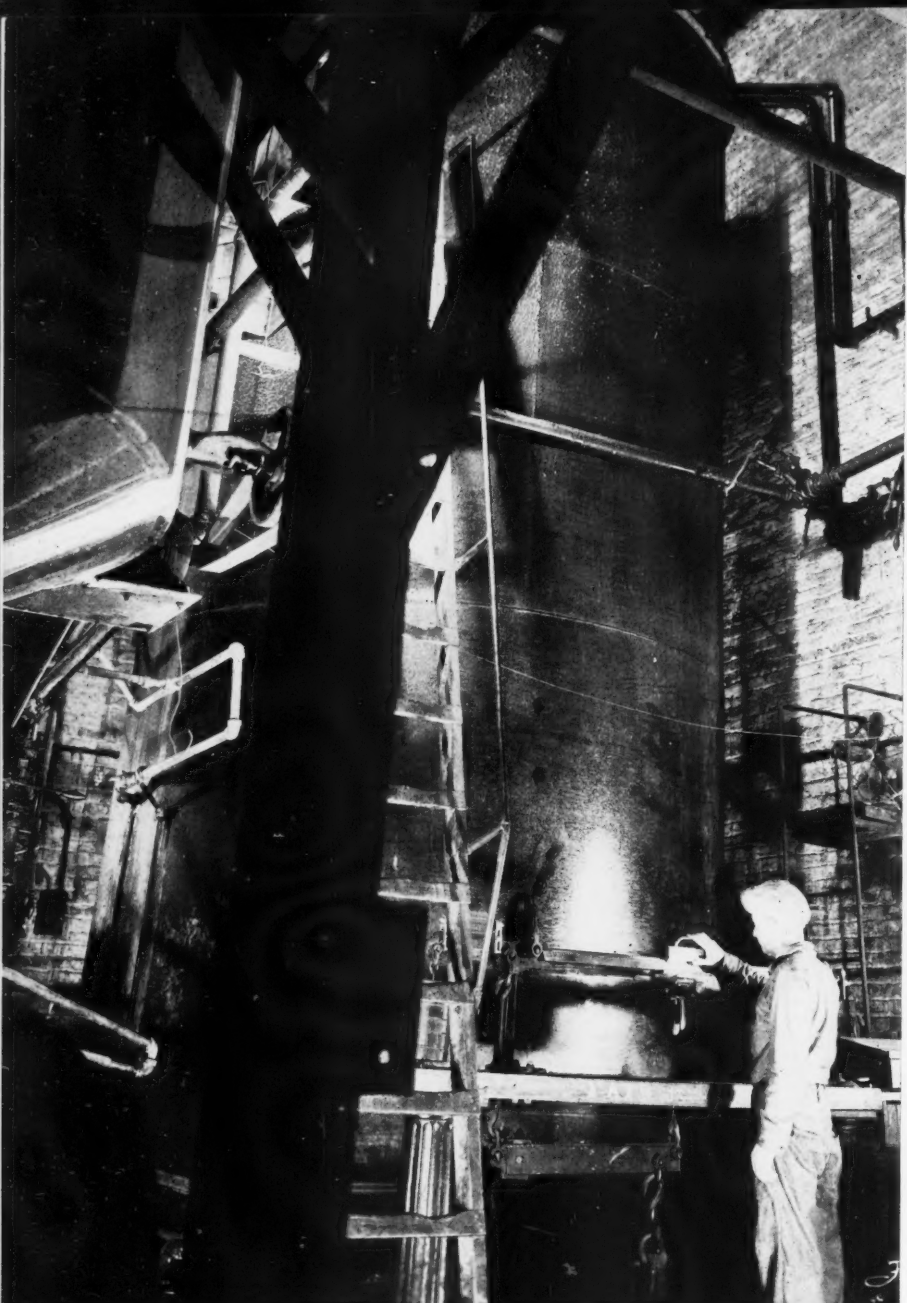
size soap works, in the light of modern manufacturing methods.

Although it is obvious that the owners of smaller soap plants cannot afford wholesale reorganization and revamping of factories on a scale which might be applied by larger works, there are nevertheless a number of ways in which important and even drastic economies may be effected and which are not always in use. The main headings under which a practical approach to the problem of cutting costs may be enumerated are as follows:

- (a) Economy in use of raw materials.
- (b) Efficient recovery of glycerine where it is recovered.
- (c) Improvements in plant and equipment. This applies to modifications of lay-out as well as to the installation of new units.
- (d) Economy in the use of labor. With this may be associated various savings in time and energy that will be referred to later.
- (e) Economy in fuel and steam.
- (f) Specialization of output and the drastic pruning of unsuccessful lines.

The first essentials for the efficient management of a modern soapmaking concern, whatever its size may be are a well-equipped factory and a director with ability for clear thinking, with experience and the will to learn.

Ample room for working is a first essential. It is not my intention to discuss specific lay-outs, for this must obviously depend very largely upon the site available and the rela-



NO INDUSTRY can escape the changes and progress which are constantly taking place. Many of the prevailing difficulties of present-day industry had their origin in the Industrial Revolution which served to replace much individual craftsmanship and hand labor with machines, thus bequeathing a difficult and unequal heritage. With the development of machine operations has come an intensification of competition, and this competition has in turn forced further progress upon industry.

Cost of oils and fats represents the greatest expenditure in soap manufacture, and likewise the greatest potential loss lies in their misuse or waste. Accurate weighing of raw materials is essential.

which no factory, no matter how small, has been able to ignore with impunity. This article is accordingly given over to a consideration of ways and means better to meet competition by increasing efficiency and cutting costs, chiefly in smaller and medium-

PLANT COSTS...

A study of losses, leaks, and waste in smaller soap plants, and means of reducing them

By J. M. Vallance

tive position of roads, railways, canals, etc. All that can be said as a general principle is that the least possible impediment is desirable between incoming raw materials and packaging materials and the outgoing finished soap. Departmental records should be made and all working departments kept clear of stock, thus obviating congestion and unnecessary handling.

A works manager for a well-organized, medium-size English plant, P. J. Truscott, has enumerated the following outstanding requirements for the management of an efficiently run soapery:

- (a) Practical knowledge of manufacturing methods.
- (b) Ability and experience in cost accounting.
- (c) Knowledge of analysis at the various stages of production.
- (d) Complete understanding of raw material markets and purchasing of such materials.
- (e) Ability to select and instruct the staff employed.

In regard to the last-mentioned factor, such small but important psychological points should be noted as the fact that a change-about of jobs often has a quickening effect. This naturally applies only to routine work, e.g. a girl who has been a good worker on trimming may start, if transferred to wrapping, to reject some of the soap sent on for wrapping or packing. This then has the effect of waking up the trimmers and improving their quality of output.

Naturally, the big item in the

production of any soap is the cost of oils and fats used in its manufacture. Therefore the most important source of potential loss lies in the misuse or waste of the fat charge. While uniform quality of finished products is essential, there is no good reason for supplying the customer with too much for his money. The avoidance of overweight packing and too high a fatty acid standard can, of course, be readily avoided. The weight of incoming stocks must also be carefully checked, and this checking system should follow right through the factory until the finished soap leaves the shipping department.

If raw materials are stored in tanks, there is less likelihood of loss occurring than if they stand around for some time in drums or leaky barrels. If the latter is the case, it is advisable to have such storage containers stacked on a specially constructed concrete bay furnished with channels made to carry any leakage to a collecting sump. Rosin, etc., should be completely removed from containers during the steaming-out process. Bleaching of tallow and palm oil should also be carried out with a view to obtaining maximum yields. It is not at all uncommon to find an excessive proportion of fat left unrecovered in earth residues.

As far as caustic soda solution is concerned, the chief thing to guard against is carbonation, due to the absorption of carbon dioxide from the atmosphere, and to a lesser extent in untreated water supplies. Alkali present in spent lyes may also be a con-

tinual source of loss unless it is recovered by reaction with fatty acids.

There is insufficient space in this article to discuss specific problems such as rancidity, cracking and sweating of soaps, etc., although they naturally imply the possibility of wastage and loss of efficiency. Even so, mention might well be made of the necessity for guarding against such spoilage, by appropriate purchasing, chemical control, and storage wherever possible in non-reacting metal or glass-lined containers. The heating of excess quantities of fats and oils should also be reduced to a minimum, and it is usually advisable to store such materials in small capacity tanks, so that just sufficient quantities can be melted as desired, so that heated oil is never returned to stock. Measures of this sort tend to keep materials in good condition and thus prevent losses due to deterioration, which are not uncommon.

One of the most obvious sources of avoidable waste in the soapery is the accumulation of scrap soap, and there are of course many ways of handling this scrap. There are for example, cases in which it is best to regard such soap as completely useless except as a source of fatty acids. On treatment with mineral acid, the fatty acids may be recovered and can then be used, for example, in the manufacture of liquid soap, shampoo or disinfectant. Thus coconut fatty acids may be recovered from coconut soap scrap and used, together with oleic acid and triethanolamine, to form a clear liquid soap of a red-

dish hue and good quality. Such a procedure is not, however, frequently employed, as it is more profitable in most cases to re-melt scrap in the usual manner.

The treatment of soap scrap naturally achieves most prominence in manufacture by the cold process by which very considerable quantities of soap are still manufactured. Scrap removed from white coconut soap may be thrown back directly into the kettle, although the perfume contained in it goes to waste. A small kettle may also be set aside for working up scrap.

Knigge has pointed out that coconut soap scrap is particularly well adapted for the production of floating soap, two parts of the scrap being mixed with one of water and the mixture heated, stirred and eventually well beaten in a specially made crutcher so that a high proportion of air is incorporated. Beating is continued until the volume of the soap has increased and the specific gravity decreased to the point where the soap floats.

Soap scrap may also be converted economically into soap powder. Not infrequently it is treated with caustic soda, boiled, the excess alkali neutralized and the soap salted out. Subsequently the nigre is drawn off and the contents again boiled and bleached. Salting out and separation may be repeated until the soap is reasonably light in color. These remarks apply of course to colored soap scrap, which is probably the most difficult of all scrap to handle.

Filling materials, perfumes and medicaments undergo a certain amount of loss in practically any soapworks. The remelting of silicated soap scrap presents a special problem, which is probably best solved by washing out such alkali prior to re-boiling.

Particularly in overcrowded or dirty factories, there is a likelihood of a good deal of soap being wasted on the floors. Scraping up of this soap layer and re-working it in a small kettle is sometimes worth while, not merely for the sake of recovering the soap alone but also for improved

efficiency obtained by keeping the floors clean.

ALTHOUGH most soap plant equipment may be regarded as of a specialized character, particularly designed for the job in hand, there are frequently ways of adapting and improving any standard unit so that it fits in more effectively with prevailing conditions. For example, it is sometimes possible to improve the efficiency of soap flake dryers by fitting a special arrangement for the partial re-circulation of exhaust air.

The installation of direct motors for the direct driving of individual units is frequently much more economic than a general system involving multitudinous belt drives. The use of chutes and conveyors is also a cost-cutting feature of modern factories, as it tends to bind a factory into one composite whole, and brings the work to the workers, thus obviating a good deal of wasteful running about from one department to another. The use of labor-saving devices in the packing department alone has been and may be an important factor in reducing costs.

The relative efficiency of cooling presses, ordinary frames and drum dryers is a matter that involves a special study of all available data, including variable factors that cannot be gone into here. The installation of a scrap soap remelter has rightly been described as a most profitable investment for any soapmaker, whether big or little. A well-constructed remelter will handle all clean scrap without causing much loss of added materials such as perfume. This, in fact, is a piece of equipment that can be highly recommended to save its cost in short order.

As far as the rest of the plant is concerned, careful attention should be paid to the efficiency of all standard units, and more especially the dryers and glycerine recovery and plant.

One of the most surprising characteristics of many small and medium-sized plants is the lack of attention paid to the efficient function-

ing of the soapworks steam plant. This is sometimes the case even when the latest equipment is provided, including economizers, water-softening plant, mechanical draught and superheaters. Soapmakers would therefore be well advised to keep a continuous record of fuel consumed and steam produced, either in the form of the water evaporated or of the actual steam itself. Steam meters are used for this purpose and the statistics given by them can be checked up against the theoretical heating value of the fuel, which is determined from time to time by means of oxygen bomb calorimeters and carbon dioxide and oxygen recorders. This comparison of thermal efficiency in theory and practice should alone result in considerable savings in many factories, which at present operate without any real idea of what the performance of their steam plants should be.

Steam meters are a valuable check for recording the output of the boiler house and also of the various quantities of steam used in different departments and operations. Every outlet for auxiliary steam should be carefully checked. Finally, the insulating of pipe lines, and flanges and valves should be given regular and adequate attention. Efficient insulating is essential for the conserving of heat that would otherwise be uselessly radiated from bare surfaces. It is incidentally a useful procedure to determine the actual amount of steam that is required merely to keep the pipes and equipment hot. This figure, which may be in the neighborhood of 15 or 20 per cent, may quite frequently be reduced by careful attention to insulation. Steam meters installed in different departments are useful for determining losses of steam that may occur without any useful work being accomplished.

Incidentally, one of the most efficient of the smaller British soapworks utilizes coke breeze as fuel, even though it happens to be situated close by a colliery. Coal would be considerably dearer in practice than coke breeze, but of course the boiler house has to be modified in order to allow the latter fuel to be used. In

this case superheated steam at 350° F. is forced through the red-hot mass, with the result that water gas is formed, and burns with an intense heat that is more easily regulated. This system of fueling was specially devised for the purpose and it has been found in practice to be economic and efficient.

MANY processes, presenting a radical departure from customary practice, have been suggested for reducing costs in the soap factory. Unfortunately, whatever economy is effected by these means, is liable in most cases to be offset by the poor quality of the resulting soap, or by loss of glycerine or other cost-augmenting factors. Indeed, if this were not so, soapmaking would have altered in recent years far more than has actually been the case. But, mention of the fact that processes such as "dry" saponification and the so-called "rapid" saponification is by no means without interest or practical significance today in the light of current developments. Soapmakers having thoughts in the direction of such innovations as a means of reducing costs are recommended to make a special study of the various patents involved and also of the considerable published information on the subject.

Practical continuous soap production has always fascinated the experts, and a fair amount of information on the possibilities of such methods was given in my article on the Löffl process that appeared in the February, 1936 issue of this journal. Other aspects of the subject include the making of soaps in vacuum, pressure saponification, the filling of hot soap direct into cartons, special spray processes and various systems that utilize the intimate admixture of fats and alkalies, etc. by mechanical means or high pressure. Most of these methods are at the present time out of reach of the average small soapmaker.

The extremely interesting and, in my opinion, important work carried out on the subject of carbonate saponification by Dr. R. L. Datta and Ashutosh Das, of the Bengal Depart-

ment of Industries, does not appear to have attracted such a widespread degree of attention as the difference in price of sodium carbonate and caustic soda would indicate. Commercially, the use of soda ash and sodium carbonate in soapmaking is at present limited to the saponification of fatty acids. Most of the processes relating to carbonate saponification of fats and oils have proved either impracticable or incomplete, depending upon very high pressures or the use of unsatisfactory lypolytic substances. Early in 1936, however, these two investigators collaborated in the Bengal Industrial Research Laboratories to study the most favorable conditions whereby saponification by sodium carbonate can be made to proceed normally to its maximum possible efficiency with a view to its application in commercial practice without the use of any foreign substance or the use of any special plant, replacing to a substantial extent the more expensive caustic soda.

Their experiments appear to prove that if 100 per cent soda ash is used, 60 per cent of this is reacted upon, necessitating the addition of 40 per cent of free fatty acids obtained by any of the fat splitting processes for the utilization of all the soda ash and final reacting of the balance of 40 per cent of the glycerides with caustic soda to form the final soap. Leaving out of account the free fatty acids added to neutralize the unreacted soda ash, a saving of 60 per cent of caustic soda is effected by replacing it with the cheaper soda ash.

Using the theoretical quantity of sodium carbonate, the saponification cannot be made to proceed beyond the reacting up of 60 per cent soda ash added in the case of blended stocks as used in regular soapmaking. No individual stock gives this efficiency and the percentage reacted upon varies from 56.7 per cent (cottonseed oil) to 10.8 per cent (mustard oil), according to the nature of the stock and the ease with which it saponifies. Normal soapmaking blends appear to give the maximum value of saponification (generally higher than the theoretical values of individual con-

stituents), — a phenomenon that is attributed to the "mutual effect" of different stocks reacting at the same time.

Some soap makers in the interest of lower costs may wish to try out the possibilities of this partial saponification with sodium carbonate. For their benefit, the essential details of the process may be summarized as follows: The oil and fat charge is boiled up with equal parts of water, and to it is added, from time to time, portions of the required quantity of 12 per cent soda ash solution. Emulsion formation occurs in the usual manner. Care should be taken, when adding the alkaline solution, not to disturb the state of the emulsion. Water may be added if the mass thickens up in too-pronounced a fashion. Frothing over, due to the evolution of carbon dioxide, should be *guarded against* by allowing *sufficient kettle space* to permit excessive swelling. The basis of successful laboratory experiments has been a nine hours' total boil, but this may of course need to be modified in actual works practice. As not all of the carbonate is utilized in the saponification reaction, the unreacted portion (e.g. about 8 per cent) may be used up by the addition of rosin or fatty acids. The kettle charge is then finished by utilizing the required quantity of caustic soda. When one compares the cost of soda ash with that of caustic soda, the possibilities presented by the foregoing and modifications of it would appear to be well worth investigation.

Cheap fatty acids may also be profitably worked up into lower grade soaps by using soda ash as the saponifying agent. Thus Japanese fish oil fatty acids or distilled cotton oil acids may conveniently be subjected to carbonate saponification, the resulting product proving satisfactory enough for use as textile, carpet, paint-washing or other industrial soaps, although it could scarcely be described as suitable for toilet use. Another related product that has found successful application in low-grade washing pow-

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GLYCERINE OUTLOOK...

What Are The Reasons Behind The Surprising Stability of Glycerine Prices in The Face of "Total War" in Europe and Rearmament at Home?

MEMORIES of the period during World War 1 when glycerine prices soared to record levels have given rise over recent months to a certain amount of speculation as to whether history will repeat itself. It will be recalled that in the fall of 1915, about a year after the outbreak of the first World War, prices of all grades of glycerine started to rise rapidly, doubling and then tripling in the space of a few months, finally reaching their peaks in 1917 when soaplye crude was quoted at 51 cents a pound and dynamite and C. P. glycerine were quoted at 70 cents a pound. In view of the war involving all of Europe at this moment, this might well be an appropriate time to review the current picture of the glycerine market.

There are a number of important considerations which make the present outlook for glycerine essentially different from that which existed in 1914. First and foremost is the comparison of world stocks on hand at the outbreak of hostilities in 1914 and in 1939. The beginning of the war in 1914 found all the countries of Europe with very limited stocks of glycerine and a crying need for this material in the manufacture of explosives. The scarcity at that time was, furthermore, not limited to Europe alone, but also was felt all over the world. While pre-war production figures were not recorded, rough estimates made in 1913 put the world production of glycerine at 135,000,000 pounds per annum, with the United States producing 40,000,000 pounds of this total, calculated on the basis of 80 per cent crude.

In twenty-five years, the situation has changed considerably. In

1939, the warring countries of Europe were in an excellent position as far as glycerine was concerned. They felt no scarcity apparently. Production in the United States had risen to 183,000,000 pounds a year and the world figure was probably in excess of 350,000,000 pounds. From the above approximations it can be readily seen that the glycerine scarcity of 1914 does not exist today. Not only is production much higher, but in addition the countries of Europe have been careful to build up substantial glycerine reserves over recent years by restricting exportation. Moreover, a great many processes for the production of glycerine by fermentation of sugars and by synthesis from petroleum products or from acetylene, ethylene and propylene have been developed particularly in Germany, since 1914. Whether these processes are being utilized on a commercial scale in Germany today de-

pends on the relative availability of soap-making raw materials on the one hand and sources of cheap sugar on the other. Processes of this type serve to make glycerine more readily available from a greater variety of sources and less dependent on a supply of oils and fats.

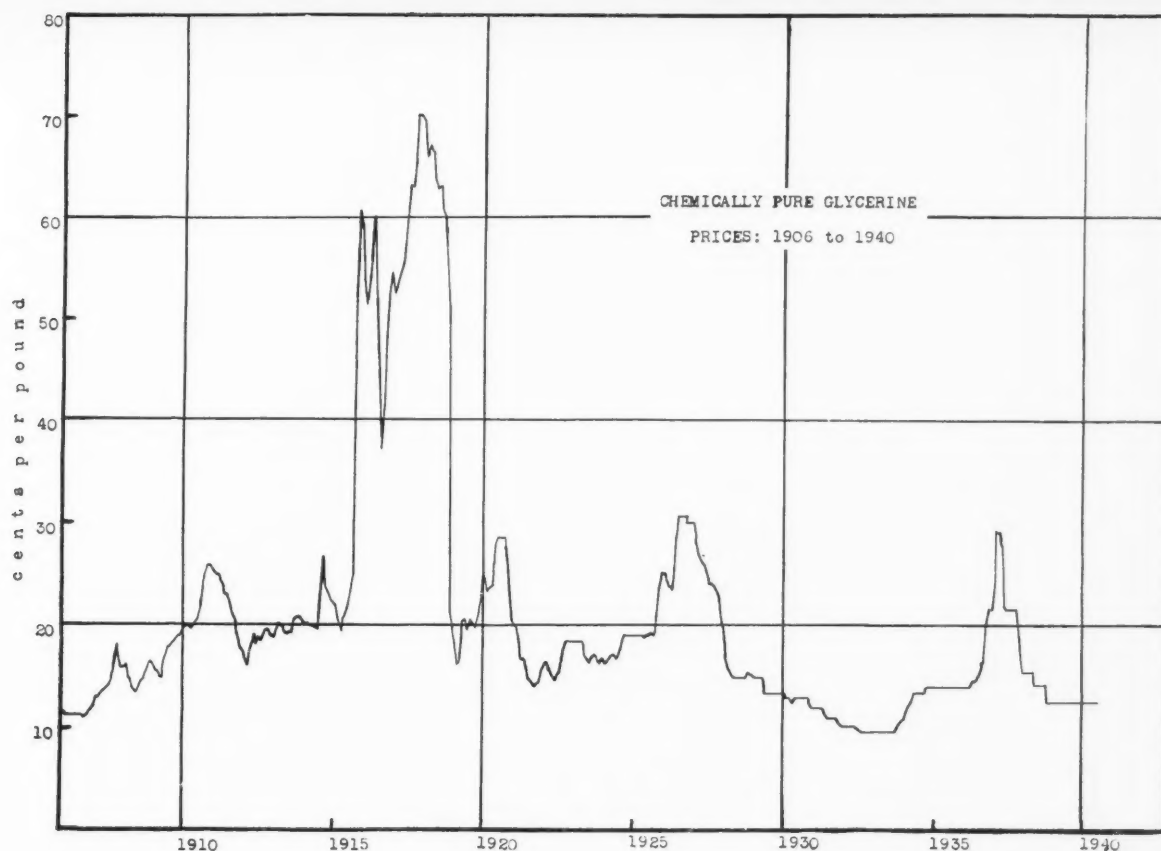
There has been another important change, too, in the "glycerine vs. war" set-up. The outstanding use of glycerine in pre-war days, was in the manufacture of explosives, principally in the manufacture of the cordite type of smokeless propellents. From long experience, it was found that cordites containing a high percentage of nitroglycerine, had the unfavorable characteristic of being erosive to the bore of the guns in which they were used. Moreover, the brilliant flash produced by this type of powder did not recommend it particularly for war use. For these reasons, nitrocellulose cordites, which proved to be less erosive and to have generally superior qualities, have replaced the nitroglycerine type to a great extent. Thus nitroglycerine has become somewhat less significant as a propellant explosive and as a direct war material. Still important as an explosive, its uses are now more adapted to blasting in mining operations. It is more and more to be regarded as a peace-time commodity. So many new, more effective war explosives have been developed in the past twenty-five years that glycerine has been rendered less essential to the wagers of war for the manufacture of nitroglycerine.

Today the largest single industrial user of glycerine is the tobacco business. Glycerine is used in practically every pipe tobacco and in every popular brand of cigarette.

Glycerine Production and Stocks in the United States In Terms of Absolute (100%) Glycerine: 1920 to 1939

Year	Stocks on January 1	Production of Crude
1920	11,240,000	43,750,000
1921	18,260,000	51,160,000
1922	21,330,000	68,270,000
1923	20,710,000	79,660,000
1924	20,760,000	76,120,000
1925	21,040,000	82,730,000
1926	12,370,000	93,100,000
1927	20,970,000	102,570,000
1928	36,520,000	104,400,000
1929	31,650,000	112,060,000
1930	26,660,000	110,940,000
1931	25,880,000	112,000,000
1932	34,430,000	107,140,000
1933	44,500,000	95,850,000
1934	24,200,000	122,500,000
1935	32,980,000	112,950,000
1936	34,400,000	123,280,000
1937	31,180,000	135,230,000
1938	56,080,000	129,700,000
1939	77,670,000	146,890,000
1940	70,890,000	

U. S. Bureau of Census Figures



with one exception, as a moistening, sweetening and antiseptic agent. Increased glycerine consumption has accompanied the tobacco industry in its rise. So many women joining the ranks of cigarette smokers since 1914, has been a huge factor in the increased use of tobacco. The amount of tobacco used up every year in the United States has just about doubled in the past twenty years. As a result a substantial portion of American glycerine production goes up in smoke every year.

Many new products which have been developed in recent years have grown to not inconsiderable proportions as consumers of glycerine. The rapid strides of the synthetic resin and plastics industries account for an important share of the glycerine produced in the United States and indications point toward an even greater expansion of these industries. Glycerine finds an important use as a plasticizer in the manufacture of cellophane, an industry which has grown so much

in the last fifteen years that it has now become one of the important outlets for glycerine. Glycerol resins of the alkyd or "Glyptal" type are other products in the manufacture of which glycerine figures prominently. These compounds were almost unknown in 1914. Almost every year since alkyd resins were first put on the market, their use in the United States has increased steadily, and shows no sign of leveling off. As they are finding increasing application in many new kinds of products, there is reason for believing that alkyd resins will continue to be of ever mounting importance to glycerine producers.

The use of glycerine in foods such as chocolate, shredded coconut, candy bars, and similar products for preventing them from drying out rapidly, accounts for a large percentage of the annual glycerine production. Chewing gum, medicinals, cosmetics, and beverages are other products in the manufacture of which glycerine is assuming a role of in-

creasing importance. It would be almost impossible to list all the products on the market at the present time to which glycerine is added to improve certain qualities. These few mentioned here, however, are among the most prominent of the glycerine-containing products made in the United States and indicate the multiplicity of peace-time purposes for which glycerine is used.

The major uses of glycerine today, as enumerated in the foregoing paragraphs, especially when the large world stocks are taken into consideration, are of a sort not liable to be drastically affected by war conditions. Such a diversity of uses of a pacific nature should have a stabilizing effect on glycerine prices. During the past year and a half, glycerine prices have fluctuated very little, especially the C. P. and dynamite prices which have been steadier than ever before.

An important factor in the stability of glycerine prices has been the

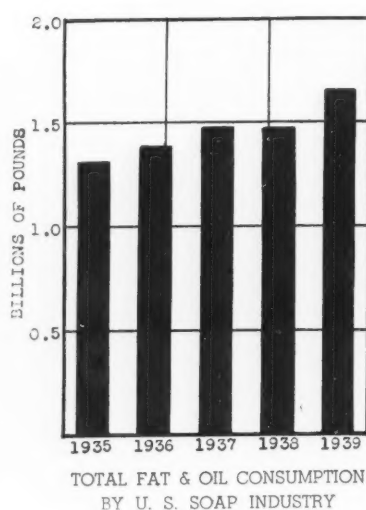
(Turn to Page 73)

Analyze Soap Fat Consumption Trends

Use of Palm-Kernel Oil In Soap Kettle Continues Sharp Decline . . . Increasing Quantities of Babassu Oil Finding Use In Soaps . . . 25% More Grease Used by Soapers In 1939 . . . Fish Oils Consumption Shows 44% Gain . . . Total Fat Consumption by Soap Industry Up 12.5%

A NUMBER of interesting trends in soap makers' oil and fat buying preferences are indicated in a report just released by the U. S. Bureau of the Census covering statistics on animal and vegetable fats and oils in the United States for the period 1935 to 1939. The report shows that more fats and oils were used by the soap industry in 1939 than by any other single American industry, not excepting the manufacture of shortening, which in previous years had accounted for the lion's share of the oil and fat consumption in the United States.

Soapmakers' purchases of fats and oils during 1939 reached the impressive total of 1,653,704,000 lbs., a gain of 12.5 per cent over the 1938 total of 1,468,535,000 lbs. When compared with consumption figures for 1935, the increased use of fats and oils by the soap industry



is even more impressive. The 1939 figure represents a gain of 26 per cent over the 1,312,790,000 lbs. of soap fats used in 1935 production.

Most important item in the 1939 total was 785,041,000 lbs. of

inedible tallow, constituting 47.5 per cent of the total consumption figure for 1939. More tallow was used by the soap manufacturer in 1939 than ever before, although when viewed on a percentage basis in comparison to total fat consumption, no increase can be noted as the gain in use of tallow paralleled the general consumption trend.

This was true also of coconut oil, the second most important oil of which 388,912,000 pounds were used in 1939, or 23.5 per cent of the total consumed by the soap industry. The relationship was 23.4 per cent in 1938, 17.1 per cent in 1937, 22 per cent in 1936 and 17.5 per cent in 1935. The two major soap stocks, inedible tallow and coconut oil, together accounted for 71 per cent of all the fats and oils used in 1939, while the remaining fats and oils accounted for only 29 per cent of the total.

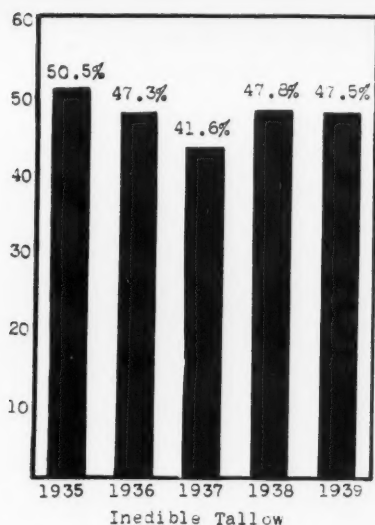
More grease was used in 1939 by soap makers than in any year since 1934. Remaining the third most important soap fat in 1939, grease accounted for 7.3 per cent of the total figure, or 120,856,000 pounds. This represents a gain of 25 per cent over 1938 when 96,356,000 pounds were used. The soap industry continued to be the most important market for greases.

Increased fish oil consumption in 1939 brought fish oils, back into fourth place with 6.9 per cent of the total, or 114,961,000 pounds as compared with 5.4 per cent of the total in 1938 or 79,874,000 pounds. The 1939 figure, although it was 44 per cent higher than that of 1938, was still lower than the amounts of fish oil used in 1936 and in 1937. The

**Oil and Fat Consumption in the American Soap Industry
1935 to 1939**

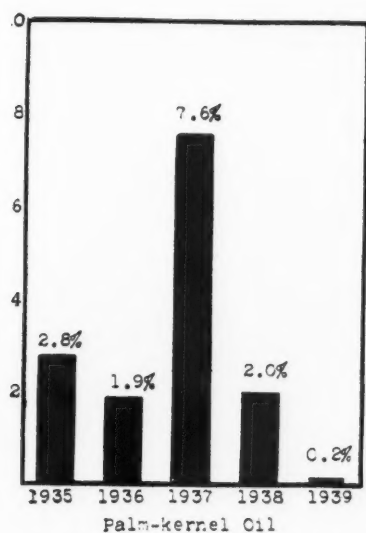
(Quantities in thousands of Pounds)

Kind	1935	1936	1937	1938	1939
Tallow, inedible	663,002	660,020	613,509	702,267	785,041
Coconut Oil	229,711	307,376	252,241	342,982	388,912
Grease	98,086	98,714	94,247	96,356	120,856
Fish Oils	109,970	128,044	123,879	79,874	114,961
Palm Oil	87,311	78,453	141,358	91,642	102,146
Marine Animal Oils.....	28,440	32,603	65,130	66,080	51,522
Babassu Oil		8,993	14,308	8,289	37,633
Olive Oil and Foots.....	33,197	25,599	18,874	16,312	20,507
Soybean Oil	2,549	5,023	10,274	10,897	11,177
Corn Oil	2,828	2,527	2,392	2,514	4,441
Palm-kernel Oil	37,273	26,443	111,514	29,498	3,657
Linseed Oil	1,196	1,482	1,359	1,455	1,780
Cottonseed Oil	1,857	1,278	8,414	2,883	1,061
Rapeseed Oil	8,001	7,771	981	55	2
Total	1,312,790	1,394,538	1,475,756	1,468,535	1,653,704



increased use of fish oils in 1939 more than compensated for the decrease in the use of marine animal oils which dropped off to 51,522,000 pounds in 1939, or only 3.1 per cent of the total amount of fats and oils used in producing soaps. As compared with 1938, when 66,080,000 pounds were consumed, the use of marine animal oils fell off 22 per cent in 1939.

Substantially increased quantities of palm oil went into the soap kettle in 1939, 102,146,000 pounds being used. The percentage relationship, like those of tallow and coconut oil, however, remained very much the same as that of 1938. Palm oil accounted for 6.2 per cent of the total fats and oils consumed in 1938 and in 1939, 9.6 per cent in 1937,



5.6 per cent in 1936, and 6.6 per cent in 1935.

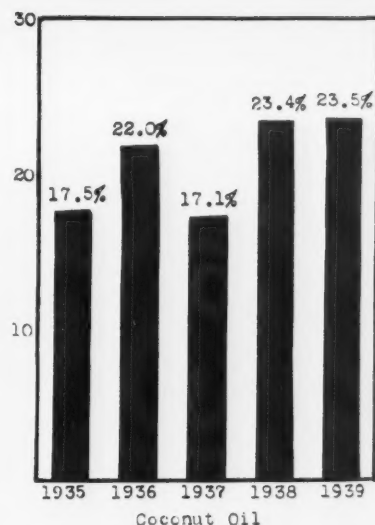
Use of babassu oil in soap rose to the unprecedented figure of 37,633,000 pounds in 1939 as contrasted with only 8,289,000 pounds which were used in 1938. This was an increase in one year of 350 per cent. Babassu oil accounted for 2.3 per cent of the total consumption figure for 1939 while in 1938 its use amounted to only 0.6 per cent of the total. The increased use of babassu was roughly balanced by a corresponding decrease in the use of palm-kernel oil.

The comparatively small amount of 3,657,000 pounds of palm-kernel oil was used by soapers in 1939 as compared to 29,498,000 pounds in 1938 and 111,514,000 pounds in 1937. In three years, the use of palm-kernel oil fell to 3 per cent of its 1937 consumption figure. In fifth place of importance in 1937, palm-kernel oil dropped to eleventh place in importance as a soap oil in 1939, accounting for only 0.2 per cent of the total consumption.

The U. S. Census Bureau figures show that 8,001,000 pounds of rapeseed oil were used in making soap in 1935. In 1936, use had fallen off to 7,771,000 pounds; in 1937, to 981,000 pounds; in 1938, to 55,000 pounds, while in 1939 only one ton of rapeseed went into soap. Cotton seed oil, to the amount of 1,061,000 pounds was used in 1939 as compared to 2,883,000 pounds in 1938 and the high figure of 8,414,000 pounds in 1937.

The use of soybean oil has been increasing steadily over the past six years. In 1935, 2,549,000 pounds were used by soap makers. Use in the soap kettle rose to 5,023,000 pounds in 1936, to 10,274,000 pounds in

Figures in the charts for tallow, coconut oil, palm-kernel oil and babassu oil represent for each oil its percentage of total oil and fat consumption by the soap industry during years 1935 to 1939.

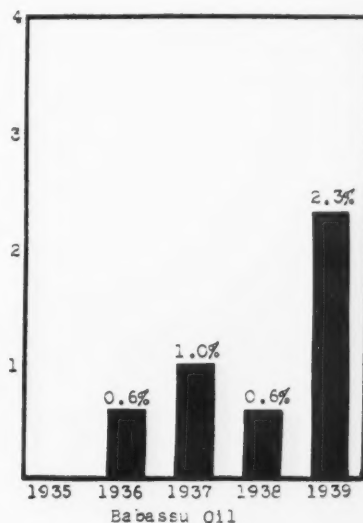


1937, to 10,897,000 pounds in 1938, and to 11,177,000 pounds in 1939.

Corn oil consumption: increased by 77 per cent in 1939, its use advancing from 2,514,000 pounds in 1938, to 4,441,000 pounds in 1939. This sudden increase is notable, for, as can be seen from the accompanying table, the use of corn oil during the period 1935 to 1938 had remained at a fairly constant figure in the neighborhood of 2,500,000 pounds a year with no remarkable fluctuations.

Sulfur oil or olive foots to the amount of 19,068,000 pounds found its way into soap in 1939, as compared to 15,013,000 pounds in 1938. The 1939 figure, however, is

(Turn to Page 55)





"Twill" jelly shampoo, product of Lem-Pet, Inc., Chicago, formerly exclusively a beauty shop item, is now packed for retail distribution. Tubes and carton are by The New England Collapsible Tube Company.

New Products and



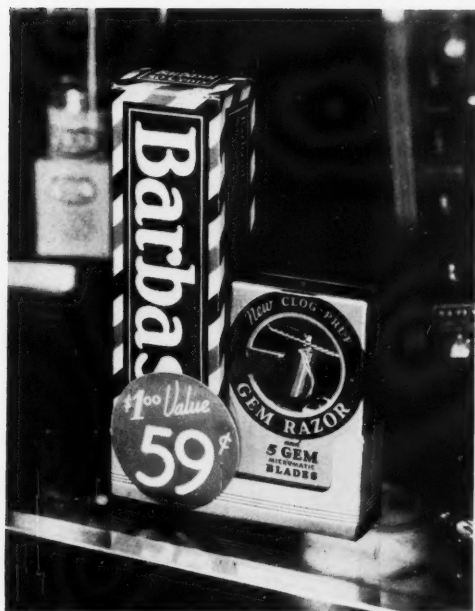
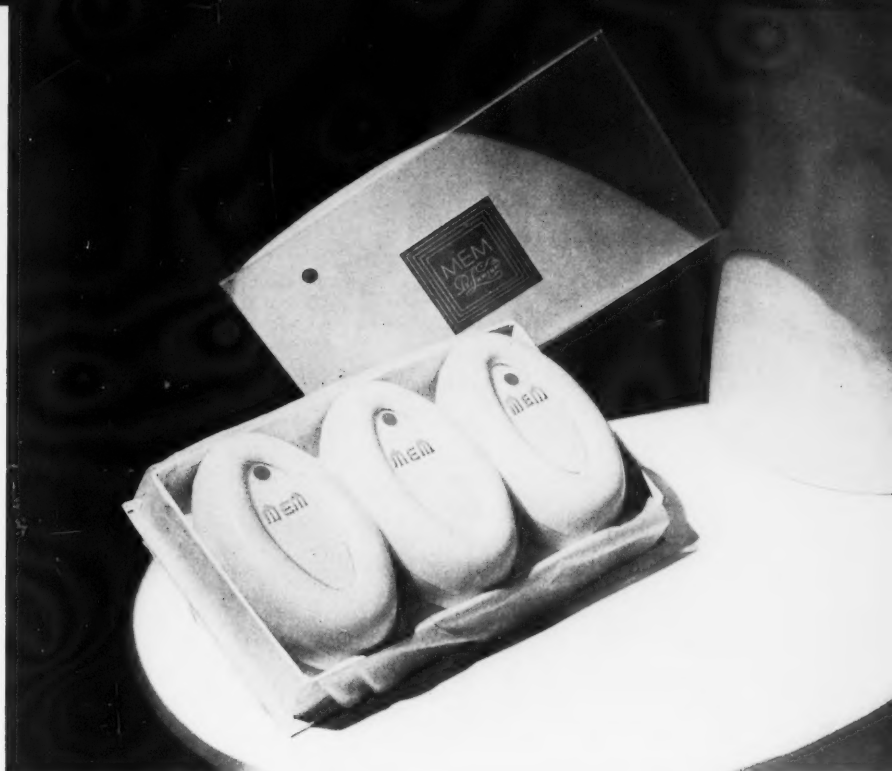
The latest addition to the household products line of S. S. Stafford, Inc., New York, is "Wyt-S-Sno" white shoe cleaner. A companion product in liquid form has been on the market for years. Package by Art Tube.



G. H. Packwood Mfg. Co., St. Louis, is currently introducing two new packages for "Pax" heavy duty and light duty granulated soap. Containers are of the shaker-top variety, one using a red and white color scheme and the other using green and white.

Packages

The "Mem" line of fine toilet soaps, formerly made abroad and favorably known in the American market for many years, is now being made in New York City by Mem, Inc. Novel packaging features the entire line.



A combination package problem resulting from a joint offer of shaving cream and razor blades has been solved in the manner indicated by Barbasol Co. The "boot" binds the 2 units together for counter display.

Clifton Chemical Co., New York, now offers its gallon size of "Rub-No" liquid wax in a lithographed can. Container by Commercial Can Co., Brooklyn. Other packages include a five gallon can and drums of various sizes.



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News.....

Shampoo Tints Ruled Hair Dyes

The Food & Drug Administration, in a recent ruling has put shampoo tints into the classification of hair dyes. As such, shampoo tints come within the regulations of the Federal Food & Drug Act and must conform to the labeling requirements stated in section 601-a.

Wrisley Employees Golf

The annual golf tournament of the Allen B. Wrisley Distributing Co., Chicago, was scheduled for June 22 at Woodridge Country Club near that city. Employees, road salesmen and executives were to participate. Last year President Wrisley B. Oleson himself acquired permanent possession of the Wrisley trophy when he won it for the third consecutive year, so that a new trophy had to be secured for the current competition. A lunch at the club house and an afternoon at cards were planned to follow the morning games, according to H. A. Salmon, personnel manager, in charge of arrangements.

P&G British Executive In U. S.

Morton P. Woodward, executive in the manufacturing department of Procter & Gamble interests in England, arrived in Cincinnati in June, being one of the party crossing the Atlantic on the *President Roosevelt*.

Buys George E. Marsh Co.

Beach Soap Co., Lawrence, Mass., a subsidiary of Cowles Detergent Co., Cleveland, has recently purchased the inventories, trade names and good will of George E. Marsh Co. and Lysander Kemp & Sons Corp. from Consolidated Rendering Co., Boston, according to A. L. Mercer, president of both the Beach company and the parent company. The Beach company plans to continue the manufacture of the Marsh and Kemp brands

of soap at the Beach plant. C. F. Mudgett, superintendent of George E. Marsh Co., will transfer to the Beach company.

Make "Suds-More" in Kansas

W. Brungardt, one of the five Brungardt brothers who have been soap-makers in Omaha for the past nine years, has recently started his own factory in Newton, Kansas, where he manufactures "Suds-More" powdered soap. Another brother, D. Brungardt, is now making and distributing the product in Hayes, Kansas, while the three other brothers are still located in Omaha.

Bertolet Wins Golf Prize

C. E. Bertolet of Laurel Soap Co., Philadelphia, won a prize in the kickers' handicap class at the annual outing of the Philadelphia Textile Manufacturers' Association at Oreland, June 19.

Medicinal Soap Ruling

Labels of medicinal soaps which are subject to the provisions of the Food and Drug Act must bear a statement of the weight of the soap, according to a recent ruling of the Food and Drug Administration. The ruling was made in answer to a query whether it might not be possible to designate medicinal soap by numerical count rather than by weight since soap is subject to changes in weight due to loss of moisture content. Regarding weight variation due to loss in moisture, the Administration calls attention to regulation (k) (1) under section 502(b).

Swift to Build Oil Mill

An eight-press cottonseed oil mill capable of crushing 15,000 to 18,000 tons of seed a year is now being constructed by Swift & Co., Chicago, in Portageville, Mo. The mill is to be ready for operation about September 1.

A golf foursome with a soapy flavor at the recent tournament of the Toilet Goods Association at the Ridgewood Country Club, Ridgewood, N. J. Left to right: Alex Henderson of Allied Products, Martin Schulties of Hewitt Soap, Roscoe Edlund of the Association of American Soap & Glycerine Producers, and Hugo Mock, general counsel for the Toilet Goods Association. Rumor has it Martin and Hugo paid off.



Refuse "Early American" Mark

Opposition to the registration of the trade-mark, "Early American," of Shulton, Inc., New York, by Illinois Watch Case Co. has resulted in the United States Court of Customs and Patent Appeals denying permission to Shulton, Inc., to register the mark on the grounds that it is similar to the trade-mark, "Elgin American," held by Illinois Watch Case Co. This decision was reached only after the case had been twice appealed and twice reversed, having been argued before the Examiner of Interferences, the Commissioner of Patents, and finally the U. S. Court of Customs and Patent Appeals. The final decision applies only to the question of registration and is not a decision as to the commercial rights of the two companies.

Chem. Salesmen Golf Winners

Prize winners at the initial golf tournament of the Salesmen's Association of the American Chemical Industry, held at Green Meadows Country Club, Harrison, N. Y., on June 18, were as follows: First prize, low net class A, G. S. Furman, Merck & Co., 70; second prize, low net class B, Charles Frost, Prior Chemical Corp., 67; third prize, members kickers, Russell Boland, *Drug Trade News* 83; fourth prize, second low net class A, L. S. Lloyd, Alex Ferguson & Co., Philadelphia, 71; fifth prize, second low net class B, J. Remensnyder, Heyden Chemical Corp., 72; sixth prize, members kickers, J. R. Eldridge, Virginia Smelting & Refining Co., 77; seventh prize, guest low net, A. Weiner, Standard Naphthalene Products Corp., 75; eighth prize, guest kickers, G. Brinton, 82; ninth prize, members kickers, F. Smith, Merck & Co., 78; tenth prize, members kickers, C. O. Lind, Dow Chemical Co., New York, 81.

Sulfathiazol—Soap Ingredient

Soap containing sulfathiazol, one of the more potent derivatives of sulfanilamide, is extremely effective in the elimination of impetigo, a skin infection, according to a report

read recently by Dr. Grayson L. Carroll of St. Louis before the New York meeting of the American Medical Association.

Study Soap Plant Lighting

Illumination in soap factories is the subject of a publication issued recently by the British E. L. M. A. Lighting Service Bureau after research on factory lighting for a number of years. The lighting in foot candles recommended by the Bureau is as follows: kettle houses, cutting, soap, chip and powder, 8 foot candles with a range from 4 to 6; stamping, wrapping and packing, filling and packing soap powder, 8-foot candles with a range from 6 to 10. These recommendations are above those specified by the British Factories Act of 1937, which merely states that over the interior working areas of any factory the illumination at floor level, or at three feet below the level at which work is carried on, shall not fall below 1 foot candle. Considerable improvement may be effected in soap factory lighting, it is pointed out, by painting all exterior surfaces of plant and machinery with aluminum paint wherever possible.

Foragers Hold Annual Outing

Green Gables, Atlantic Highlands, N. J., was the scene of the Foragers' annual outing on June 29, when a large turnout of members enjoyed a day of sports, contests and interior decorating, topped off with an old-fashioned shore dinner served under the trees.

Cleaning Fluid Stipulation

Lionel E. Samuels, trading as Solvosol Co., New York, has made an agreement with the Federal Trade Commission to discontinue using the word, "new," as descriptive of his product "Solvosol," a cleaning fluid. He also agreed to cease using the phrase, "leaves no ring," or any other words which give the impression that the product will not leave a ring or discoloration when applied only to the spot to be removed from certain fabrics, as for example, weighted silks.

Finishes for "Nylon" Hose

Laurel Soap Manufacturing Co., Philadelphia, has announced four new finishes developed for processing "Nylon" hosiery: (1) a lubricant and conditioner said to yield better knitting and an even stitch and to prevent sticking in the pre-boarding operation, (2) a scour for removing size, grease and dirt, (3) a dispersing agent to increase penetration and aid the production of level shades, and (4) a permanent finish said to impart smooth body and to withstand repeated washings. These products are said to have been found satisfactory in practical tests. *Am. Dyestuff Reporter* 29, 259 (1940).

Show New Type Cleaner

Kleen-O-Mat Corp., New York, exhibited at the American Newspaper Publishers Association's mechanical conference in Chicago last month a detergent and equipment for mechanical cleaning of type matrices and magazines on linotypes and other typesetting machines. Two compounds are employed, one to loosen graphite and grease on matrices and in the magazines and the second to remove oxides and brighten the brass. Cleaning of a linotype machine can be completed in thirty-five minutes where formerly four or more hours were required, according to company claims. Frank H. Laavy, sales manager, directed the demonstrations at the Chicago meeting.

Charge Deceptive Soap Pricing

Lightfoot Schultz Co., New York, Continental Blade Corp., and Lawrence Distributing Corp., of Brooklyn, have been charged by the Federal Trade Commission with unfair and deceptive trade practices. The complaint charges that these companies have been engaged in the practice of falsely representing the retail price at which their products are customarily sold, for the purpose of leading the public to believe that the actual retail value of the soaps are the prices stamped on the cartons, when these prices are fictitious. It is mentioned in the complaint that certain cartons of three cakes of soap

each were imprinted with the legend "Combination Price 75 cents," whereas the soaps are sold to wholesalers and jobbers for resale to peddlers at from \$2.60 to \$3 per gross cakes, or at a price of from 5 to 6 cents per carton of three cakes. The complaint charges that the companies have thus placed in the hands of peddlers and canvassers a means by which they are enabled to mislead and deceive the purchasing public.

C-P-P Chicago Coupon Drive

Colgate-Palmolive-Peet Co., promoted sale of concentrated "Super Suds" for laundry use in Chicago last month by offering housewives a coupon worth ten cents when applied on purchase of a large size package of the product. If a medium sized package was bought, the coupon-holder was entitled to a second, medium-size package free. Accompanying the coupon was a "Double-Your-Money-Back" guarantee, offering to refund twice the money spent if user was not satisfied with results. A second coupon was also distributed offering one cake of "Palmolive" soap with each purchase of another cake at regular price.

Boston Bims Golf at Newton

Bims of Boston held their first outing of the year on June 27 when they met at Commonwealth Country Club, Newton, Mass., for a day of golf. The Boston Bims are just starting on their second year since organizing.

Buck-Jack Incorporates

Buck-Jack Co., soap products, Baltimore, have recently incorporated with the following officers: George B. Norton, president; G. I. Norton, vice-president; William H. Thomson, secretary and treasurer. W. B. Kincheloe, formerly with Colgate-Palmolive-Peet Co., Jersey City, has been named general sales manager. Buck-Jack Co. manufactures the "Keep Clean" line of cleaning products, including granulated hand cleaner, liquid soaps, window cleaners, auto tire wash, and automobile cleaners.

William A. Harshaw Dead

William A. Harshaw, chairman of the board of Harshaw Chemical Co., Cleveland, died June 4 at his estate in Gates Mills after a prolonged



William A. Harshaw

illness. He was seventy-eight years of age. A native of Dodgeville, Iowa. Mr. Harshaw began his business career with Meyer Bros. Drug Co., Kansas City, in 1881, with which company he remained until 1884, when he joined Lord Owens & Co., wholesale druggist, Chicago. He subsequently joined Strong, Cobb & Co. in charge of chemical sales and later entered business on his own account, forming Cleveland Commercial Co., chemical merchants and brokers, which was reorganized in 1898 as Harshaw, Fuller & Goodwin Co. Mr. Harshaw served as president of Harshaw, Fuller & Goodwin from 1898 to 1924 and as chairman of the board until 1929 when the company was named Harshaw Chemical Co. He remained president of the company until 1936, when he became chairman of the board of directors. Mr. Harshaw was a trustee of the Case School of Applied Science, a member of the American Chemical Society and the Chemists Club of New York.

Boost Cosmetic Tax Rate

The new federal tax bill, just signed by President Roosevelt to provide additional revenue for defense, includes a slightly higher excise rate on cosmetics. In the new measure a tax of eleven per cent

will be levied, as compared with the rate of ten per cent previously in effect. Specifically exempt from the tax are such items as soaps, tooth paste, soap shampoos, etc. Another provision of the new tax measure is for an increase in the existing tax of \$2.25 per gallon on distilled spirits, including ethyl alcohol, to \$3 without exempting alcohol for medicinal or industrial use.

Soap Employment Index Down

The employment index for the soap industry, as compiled by the U. S. Department of Labor, dropped off again in April, 1940, still showing, however, an appreciable margin over the index for April, 1939. The April, 1940, reading was 81.7 as compared to 82.7 for March, 1940, 84.4 for February, 1940, and 78.7 for April, 1939. The payroll index, similarly based on the three-year average of 1923-25 as 100, was 99.0 for April, 1940, 99.5 for March, 1940, and 91.9 for April, 1939.

Retired Soap Maker Dies

Services for William Hickey, retired soap manufacturer, Cincinnati, were held June 5. Following a partnership in the Andrew Jergens Soap Co., he founded the William Hickey Soap Co. and his product won an award in the Cincinnati Industrial Exposition of 1882. He retired thirty years ago at the age of 58. Surviving him are his son, Sylvester Hickey; and three daughters.

Alkem Private Label Dept.

Alkem Products Co., Jersey City, N. J., who for twenty years have specialized in selling cleaning compounds in the dairy and ice cream field, have recently added a jobber's supply and private label department for dealers selling to this trade. The company will supply those interested in contacting the trade in their territories with a list of local milk and ice cream concerns, including a list of plant equipment, capacity, number of trucks, products suitable for local water conditions and type to use according to equipment.

CHEMISTRY'S JACK-IN-THE-BOX

.....TSPP

TETRA SODIUM PYROPHOSPHATE

Whichever way you turn, a new property or application of TSPP pops up. In practically every type of built soap, detergent, deflocculant, dispersing agent, water clarifier or softener, TSPP is playing increasingly important parts.

Warner will gladly give immediate attention to your inquiry for technical and application data on TSPP—will provide samples and submit price quotations. There is, of course, no obligation.

OTHER WARNER CHEMICALS

Acid Sodium Pyrophosphate

Caustic Soda	Carbon Bisulfide
Phosphoric Acid	Sodium Sulfide
Sodium Phosphates	Bromine
Liquid Caustic Potash	Blanc Fixe
Chlorine, Liquid	Barium Carbonate
Sulfur Chloride	Epsom Salt
Carbon Tetrachloride	Hydrogen Peroxide
Trichlorethylene	Alumina Hydrate, Light
Perchlorethylene	Chemical Grade Magnesia



WARNER

CHEMICAL COMPANY

DIVISION OF
WESTVACO CHLORINE PRODUCTS CORPORATION

CHRYSLER BUILDING, NEW YORK, N. Y.

Laundering Education Needed

A good educational campaign on correct laundering is what consumers need, say Philadelphia lingerie buyers, who complain that eight out of ten returns in lingerie departments can be traced to improper laundering methods used by customers. Many customers still continue to be ignorant on the subject of washing lingerie, the buyers say, in spite of all the advertising done by soap companies and recommendations on labels. The stores dislike to criticize their customers' methods for fear of losing business and ask "Can't the consumer be taught in some way other than being told by the salesgirl how to launder garments correctly?"

Chicago Golf Tournament

The second tournament of the 1940 series of the Golf Auxiliary of the Chicago Drug and Chemical and Chicago Perfumery, Soap and Extract Associations was held on June 18th at the Glen Oak Country Club. The following members were prize winners: Class A—1st, A. J. Westerman; 2nd, R. O. Hereford; 3rd, T. B. Singleton; 4th, J. E. Towns; Class B—1st, E. P. Gibney; 2nd, R. A. Morris; 3rd, George Epstein; 4th, Harry B. Elwell; Class C—1st, E. L. Drach; 2nd, H. Rothschild; 3rd, W. R. Nay; 4th, J. A. A. Scott; Class D—1st, K. S. Spraker; 2nd, C. F. Pauley; 3rd, C. L. Drum; 4th, R. P. Gillham. Guest prizes were won by Fred Wright, A. Craig and H. Halgren. The next tournament is scheduled for July 16th at Tam O'Shanter C. C.

Housewarming at Givaudan's

Givaudan - Delawanna, Inc., New York aromatic chemical manufacturers, were hosts at a housewarming cocktail party early last month. The affair took place in their new offices and laboratories at 330 West 42nd St. One of the three perfume laboratories is principally devoted to the development of odors for use in soaps and sanitary chemicals. A miniature soap plant consisting of plodder, mill and hand press enables the firm to test odors in toilet and laun-

dry soaps. Cakes are kept in an oven at controlled temperature and humidity to simulate conditions on dealers' shelves.

Ask Receiver for Fairchild

Suit for appointment of a receiver, for an accounting since 1933 and dissolution of M. H. Fairchild & Bros., Inc., Chicago, soap makers, was filed by the Illinois attorney general, for an alleged failure to pay \$2,500 of sales taxes since July 1, 1933.

To Sell Soap Plant Site

The Fairchild - Shelton Co. property, in Bridgeport, Conn., formerly the site of Ozone Soap Works, is to be sold by the city of Bridgeport. The property was acquired by the city through foreclosure for back taxes.

Microchemistry Lab Expands

Laboratory of Microchemistry, New York, has recently doubled the size of its quarters at 366 Fifth Ave., to make room for expansion. Identification and tracing the source of foreign specks and trace materials in products is one of the specialties of the laboratory, as well as microdistillations on samples as small as 0.5 cc. and specific gravity determinations on samples of only 0.1 cc. in volume.

E. T. Booth On Radio

Edwin T. Booth, secretary of Aromatic Products, Inc., New York, and well-known perfumer, discussed the problems of the "Odor Engineer" over the radio on July 2 at 9:00 p.m. from station WABC. The program which is entitled "We, the People . . .," has Gabriel Heatter as announcer, and is a regular Tuesday evening feature sponsored by "Grape Nuts" which has for its theme the unusual accomplishments of American people. Mr. Booth discussed the science of smell and odor, especially the modern business of making all things smell nice from paint to pickles, touching on the ever growing importance of odor in modern commerce and industry.

Talks On Oil, Fat Outlook

C. E. Lund, U. S. Department of Commerce, in a recent address before the North-South Carolina Cottonseed Crushers Association, told of the war's effect on the oils and fats trade. The indirect effects of the war have been considerable, said Mr. Lund. The occupation of the Netherlands, Belgium, and the Scandinavian countries has shut off the principal outlets for America's increasing oilseed, oil and oilcake exports. The normal heavy imports of these countries for their large oil-crushing industries are accumulating in the producing regions, with the United States, perhaps the one open market. Large supplies of palm oil and palm-kernels from the British and French colonies on the West coast of Africa will be available so long as Britain maintains control of the seas, Mr. Lund predicted. The war, he said, has emphasized the normal surplus position of the United States as a producer of fats, a field in which we have the alternatives of finding export markets, increasing domestic consumption, or reducing domestic supplies.

Queeny to Aid Willkie

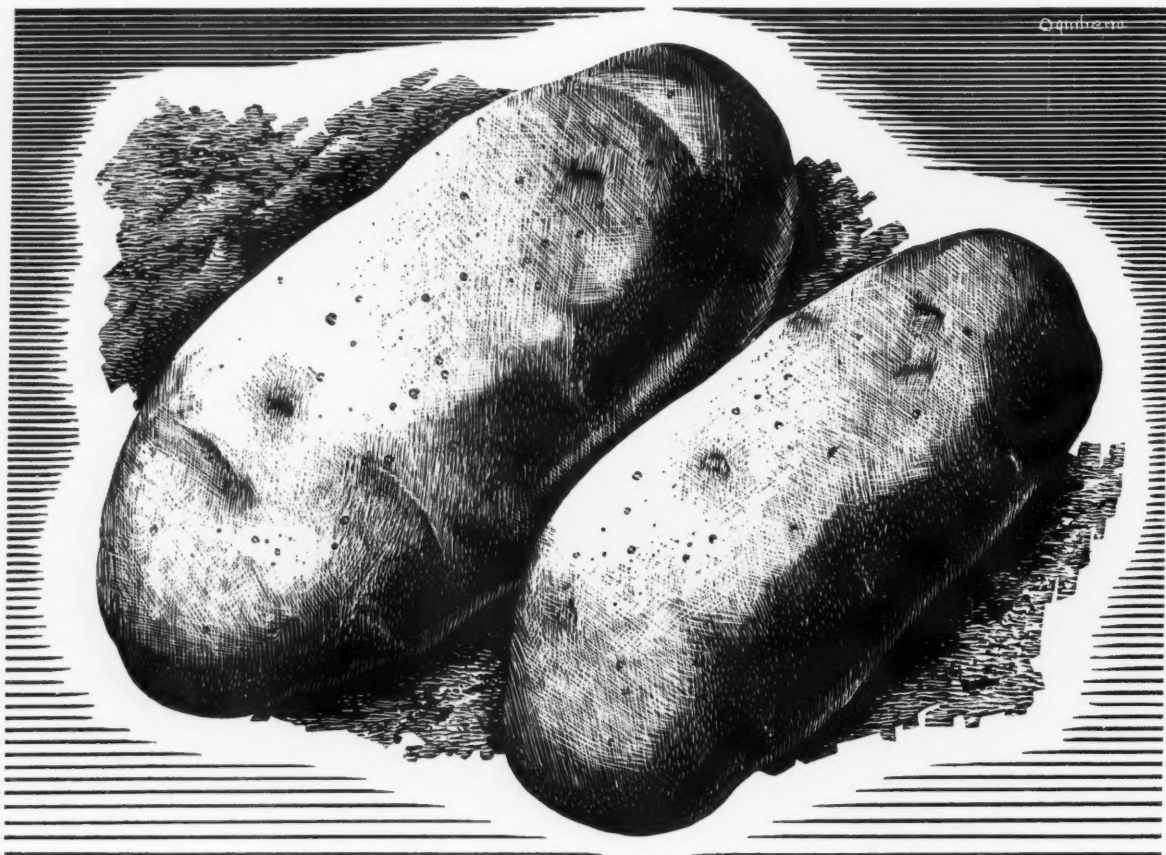
Edgar M. Queeny, president of Monsanto Chemical Co., St. Louis, has announced that, effective July 1 and until the November election, he will serve his company only half time so that he can devote the balance of his time in helping with the presidential campaign of Wendell L. Willkie.

Conti Moves Offices

Conti Products Corp., manufacturer of castile soap and shampoo, formerly of 155 Varick St., New York, has moved its executive offices and plant to 4353 Clinton Ave., Brooklyn.

Awarded Construction Contract

H. Sand & Co., New York, have been awarded the contract to construct a soap plant on Riker's Island for the City of New York. The installation of the plant is being directed by W. R. Prosser of the Sand company.



Grown from Good Earth

Good earth produces good crops—and good basic materials help make good factory products. For many years, Niagara Alkali Company has helped progressive manufacturers to keep their products in the preferred class—by furnishing a consistently dependable, uniform top quality supply of Caustic Potash, Caustic Soda and Carbonate of Potash. If you use these materials, think of Niagara as a reliable source of “good earth” for producing high quality results.

Niagara  **ALKALI COMPANY**
60 EAST 42nd STREET, NEW YORK, N. Y.

Affiliated with Electro Bleaching Gas Company, Pioneer Manufacturer of Liquid Chlorine

PARA
CAUSTIC SODA
CARBONATE OF POTASH
CAUSTIC POTASH

Study Equipment Corrosion

Rates of corrosion in various pieces of equipment used in the manufacture of soap and processing of fatty acids are studied in a new technical bulletin (T-13) which has just been completed by the development and research division of International Nickel Co., New York. Numerous tables of average corrosion rates measured in inch penetration per year are given, comparing the resistance of several nickel alloys and other metals to corrosion by fatty acids and soap-making, at essential points in the processes. Of the metals upon which the tests were made over periods varying from 6 to 250 days in duration including "Inconel," "Monel," nickel, "Ni-resist," mild steel and plain cast

iron, it was found that "Monel" and "Inconel" exhibited an extremely high resistance to all types of corrosive reactions met within these processes while the superiority of "Ni-resist," an alloyed cast iron, over plain cast iron was notable.

Summarize Dermatitis Problem

Free use of bland soaps before and after work and avoidance of improper cleaning agents such as turpentine or gasoline should do a great deal to reduce the prevalence of dermatitis, says the National Association of Manufacturers in a report on industry's most frequent occupational disease. Industrial dermatitis, they advise, usually falls into two classifications: (1) that caused by contact

with primary irritants such as acids, alkalies, metallic salts, strong soaps, etc., which are likely to affect all exposed workers equally and (2) that type due to an acquired supersensitivity of an individual's skin to a particular substance even in weak concentrations.

The chief irritants are the alkalies which are responsible for 12 per cent of all cases of industrial dermatosis. Petroleum products, certain solvents, plants, metals, dyes and acids are other irritants which may produce inflammation and diseases of the skin. Generally speaking, dermatitis caused by primary irritants is easily cured, has a short disability time and is somewhat less frequent among dark skinned types and negroes. However, it may be the first step in the development of the secondary sensitization type.

Much less frequent than the primary type, secondary sensitization dermatitis may develop in any skin type and color. It is usually cured with difficulty and tends to cause a long and extensive disability. It ordinarily develops after a period of exposure and during that period the individual will show no dermatitis unless the concentration of the irritant becomes so high as to act as a primary irritant. Once sensitized, however, symptoms of sensitization dermatitis will appear on contact with very minute amounts of the substance and will develop from concentrations that will in no way affect a normal person. Some of the substances known to cause sensitization are aniline dyes and their intermediates, lacquers, resins, turpentine, chromium compounds and formaldehyde.

The very frequent dermatitis of machinists working with cutting oils is caused by the oil penetrating into the skin and carrying in bacteria and foreign material. It can be prevented by filtering out metallic particles before use, sterilization by heat, by addition of antiseptics to the oil or by cleaning hands and exposed skin and applying protective cream or oil before work. Uncleanliness of skin is the greatest predisposing cause of dermatitis.

Review Coconut Oil Outlook

A reduction in the production of copra in the Philippines during 1940, as compared with the record crop of 851,000 metric tons in 1939, is predicted in a report released by Leo Schnurmacher, Inc., well-known Manila broker in coconut products. The high production figure in 1939 was the result of exceptionally favorable climatic conditions during 1938 and 1939, the report states. A smaller copra crop in 1940, it is to be expected, might result in an increase in the prices of coconut oil and copra which have been generally depressed for the past two years. The United States, says the report, is importing less coconut products than formerly due to the fact that domestic oils and fats are being used more and more in soapmaking to replace the imported items.

The prevailing low price of refined lard in the United States has caused a material decrease in the use of compound lard and vegetable shortening, and manufacturers of these latter products have increased the proportion of domestic oils used at the expense of higher priced imported oils in order to reduce their costs. As long as these adverse factors continue to prevail in the United States, says the bulletin, the outlook for Philippine copra is unfavorable.

from the point of view of the exporter.

In many trade circles it is felt that unless very substantial quantities of American lard, soya beans and cottonseed oil can be exported to Europe, the United States is not likely to increase, but on the contrary, to reduce its imports of foreign oils and oilbearing materials. However, ships are being diverted from their regular trade routes from tropical countries to Europe, to take advantage of the comparative safety in routing them to the United States. This withdrawal of ships from the European destination may result in higher prices for the affected products and, in spite of the greater risk, shipping may again be attracted to the usual European runs. A counterbalancing movement would then develop, and American users may find that they have not taken hold of sufficient supplies while they were able to do so at the current abnormally low prices, the Schnurmacher report advises.

COPRA CROPS IN THE PHILIPPINES

	<i>Metric Tons</i>
1935	641,507
1936	614,912
1937	656,435
1938	799,568
1939	851,462

Effective - Economical

DEODORANTS • FIXATIVES • SYNTHETICS

OXIDEX—A complex and highly developed preservative for vegetable and animal oils and fats used in soaps. Prevents rancidity and avoids, thereby, deterioration of the product's original fragrance. Effective action due to complete solubility and dispersion in fixed oils and fats.

PARAPASTELS—These synthetic specialties are for use in naphthalene and para-dichlorobenzene blocks. They destroy the unpleasant odor character of the product, substitute a clean, refreshing fragrance and color the block with any one of many attractive pastel tints.

DUROFIX—Protects and prolongs the fragrance of scented soaps indefinitely. Combines with the perfume and protects it from destructive action of the alkaline bases. Does not alter odor-character or add to cost. Ideal fixative for white soaps; will not discolor.

DEODORANT P-36—A recently developed and remarkably effective deodorant for use in products containing Lethane No. 384 Special. This deodorant completely neutralizes the Lethane effect without leaving any perceptible odor of its own. Powerful, yet inexpensive.

NEUTROLEUM—Completely and permanently deodorizes all technical mixtures—including insecticides—based upon petroleum distillates. In doing so permits reduction of from 40 to 70% of the perfume subsequently used for aromatization. Very economical.

JAVOLLAL—This specialty may be used as a substitute for Citronella Oils of Java or Ceylon in insecticides, soaps or other technical mixtures. It is very efficient and powerful—about twice the strength of Citronella—and imparts a finer, cleaner, more attractive odor.

SAFRELLA—This is an excellent, a very inexpensive and a proven substitute for Artificial Sassafras. It can be used in all insecticides, germicides or technical mixtures. Greatly improves ordinary household and industrial soaps as well as low priced toilet soaps.

METHALATE "C"—Substitutes for Methyl Salicylate in insecticide sprays based upon kerosene distillates. Possesses a similar odor and is equal in concentration, covering power and tenacity. Considerably lower in cost. Is useful in other technical products, also.

Write us for samples.



Advise us your problems.

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.
 FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

A *Fritzsche* PRODUCT for EVERY PURPOSE . . .

● ESSENTIAL OILS

Your basic materials should be the finest that modern methods and scientific skill can produce. In using FRITZSCHE'S Essential Oils you are assured matchless purity and dependability.

● AROMATIC CHEMICALS

Large selection and superlative quality characterize the materials in this group. Use them for finer aromatic effects and for greater economy.

● FIXATIVES

We carry a complete line, including Rose Crystals, one of the best all-around fixatives, also a group of Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris—especially adaptable to soap making. See also page opposite.

● ANTI-OXIDANTS

See advertisement on opposite page, then write us for full details concerning Oxidex.

● BATH SALT PERFUMES

Combining perfume and color, our delightful Bath Perstels greatly simplify and facilitate the process of manufacture. Very economical. Complete information and list of blends will be sent upon request.

● INSECTICIDES AND DISINFECTANTS

Note our advertisement on opposite page—then investigate our improved line of odors. Each item in this group embodies the latest advances in scientific perfuming.

● DEODORIZING COMPOUNDS

Technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., require good, dependable deodorizing compounds in their formulae. For effective low cost coverage we refer you to Neutroleum, Saffrola, Javollal, Methalate "C", and others described on page opposite.

● TOILET SOAP COMPOUNDS

Perfumes in this group have been specially prepared to meet the exacting demands of soap manufacture. Exquisite scents at a minimum cost. Consult our catalog.

● LIQUID SOAP AND SHAMPOO PERFUMES

These perfumes are highly soluble and mix readily with liquid soaps. Simple to use, cost limits and strength of odor desired determine quantity required.

● DENTAL AND ORAL FLAVORS

These flavors are of a special character, skillfully blended to impart pleasant, clean, refreshing taste effects. We are prepared also to create special flavor blends according to your specifications and for your exclusive use. Consult us freely.

SEND FOR SAMPLES

Bar "Viteen" as Shampoo Name

Opposition by Bristol-Myers Co., New York, to an application filed by Frank W. Epperson, Oakland, Calif., for registration of "Viteen" as a trademark for a shampoo preparation, was recently upheld by the U. S. Patent Office. Bristol-Myers Co. objected to the new registration on the ground that it would conflict with its "Vitalis" mark used on a similar product. As the two products in question are of the same type and there is, at least, doubt about the marks being confusingly similar, the doubt was settled in favor of Bristol-Myers, the first in the field.

Bims Golf In Rain

More than eighty members of the Bims of New York braved the rain to attend the second monthly golf tournament at the Winged Foot Golf Club, Westchester county, on June 11. Scores were unusually high on the soaking wet course, but Dudley Schwartzman of Allen B. Wisley Co., Frederick J. Lueders of George Lueders & Co. and Burton T. Bush of Bush Aromatics all managed to turn in low cards and were among the prize-winners for the day.

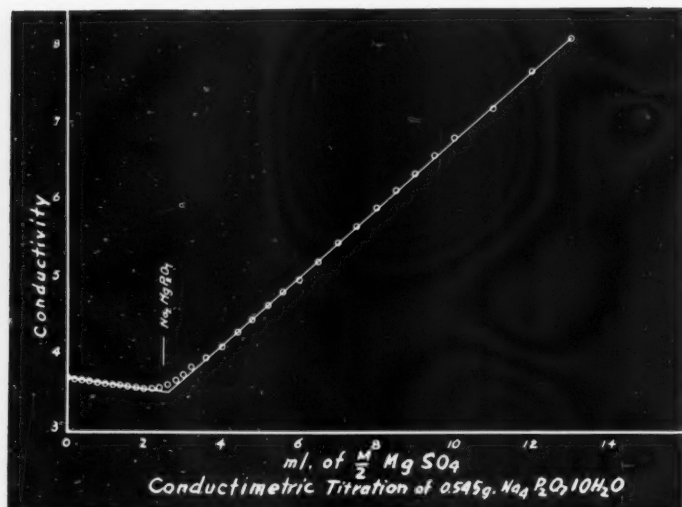
Wins Shulton Bermuda Trip

A trip to Bermuda was first prize in a needlework contest conducted recently by Shulton, Inc., New York, in cooperation with Abraham & Strauss, Brooklyn. Mrs. W. M. Griffin of Brooklyn submitted the prize-winning entry of an embroidered piece decorated with the motif of the "Early American Old Spice" line of toiletries.

Introduces Sun Screen Agent

Butyl cinnamoyl - pruvate ($C_6H_5-CH:CH-CO-CH-CO-COO-C_4H_9$) has recently been introduced by U. S. Industrial Chemicals, Inc., New York, as a light-screening agent for use in sun-tan lotions. Incorporation of this product, a straw-yellow solid, known as BK-5, in proportions of less than 1 per cent in skin lotion formulas, is said to give excellent sunburn protection.

CURD FORMATION MINIMIZED THROUGH ELIMINATION OF MAGNESIUM HARDNESS WITH VICTOR TETRA SODIUM PYROPHOSPHATE



The above chart shows a curve resulting from the conductimetric titration of tetra sodium pyrophosphate with magnesium sulphate. The break in the curve indicates the formation of the soluble complex compound $\text{Na}_2\text{MgP}_2\text{O}_7$.

ANYTHING that can be done to minimize curd formation in the wash water will materially aid in the production of cleaner clothes. Recent studies conducted by Victor research chemists indicate that Victor Tetra-Sodium Pyrophosphate plays an important role in this respect.

Victor TSPP completely eliminates magnesium as a precipitant for soap when used in the proper amount with soap mixtures. This it does by eliminating the magnesium ion as a soluble complex compound having the probable formula $\text{Na}_2\text{MgP}_2\text{O}_7$. Its action is so efficient that 1 lb. of Victor Tetra Sodium Pyrophosphate, for example, will release approximately 2.2 lb. of a tallow soap from combination as insoluble magnesium soaps.

May We send You a Liberal
Experimental Sample?

VICTOR

VICTOR CHEMICAL WORKS
141 W. Jackson Blvd. Chicago, Ill.

HEADQUARTERS FOR...
pHosphates

Contracts Awarded

Army Contracts Awarded

In a recent opening by the Army Quartermaster Corps at Jeffersonville, Ind., the following contracts were awarded: to M. H. Fairchild & Bro., Chicago, 27,000 cake soap, grit, 9 to 10 oz. at 2.9c; to Colgate-Palmolive-Peet Co., Jersey City, 425,500 lbs. laundry soap at 3.165c; and to Imperial Methods Co., Philadelphia, 144 cans of metal polish at 6.92c.

Metal Polish Award

Solarine Co., Baltimore, was awarded a contract on 4,800 qts. of liquid metal polish at 12c, fob plant, in a recent opening by the Army Air Corps at Wright Field, Ohio.

Floor Wax Bids

In a recent opening by the Veterans Administration, Procurement Division, Milco Chemical Corp., submitted the low bids of 40.3c on 27,500 gals. floor wax for Perryville, Md., and 40.3c on 22,000 gals. floor wax for Chicago, prices delivered.

Soap Awards

Gillam Soap Works, Fort Worth, Texas, was recently awarded the following contracts by the Federal Government; for Fort Sam Houston, Texas, 47,400 lbs. soap powder and 3,000 lbs. chip soap; for Fort Clark, Texas, 2,000 lbs. soap powder; for Fort Ringgold, Texas, 3,000 lbs. soap powder; for Hachuca, Ariz., 3,000 lbs. soap powder; for Fort Sill, Okla., 40,000 lbs. soap powder.

Soap Powder Bid

Armour & Co., Chicago, was low bidder on 43,004 lbs. soap powder at 2.51c, fob works, in a recent opening by the Post Office Department, Washington, D. C.

Marine Corps Bids

In a recent opening by the Marine Corps at Washington, D. C., the following low bids were sub-

mitted: by Industrial Distributors, New York, 60 lbs. olive oil soap at 13c; by Armour & Co., Chicago, 20,064 lbs. soap powder at 3c; and by Louis S. Hirsch, New York, 300 lbs. laundry compound at 15.9c.

Soft Soap Bids

Harley Soap Co., Philadelphia, offered low bids on three lots of soft soap in a recent opening by the Post Office Department, Washington, D. C., bidding 3.99c on 110 100-lb. kegs, 3.74c on 50 250-lb. half barrels and 3.49c on 115 450-lb. barrels, fob Philadelphia.

Soft Soap Bid

R. M. Hollingshead Corp., Camden, N. J., submitted the low bid of 4.65c a pound on 263,000 lbs. soft soap, fob plant, in a recent opening by the Army Air Corps at Wright Field, Ohio.

Disinfectant Bid

Murphy Products Co., Gouverneur, N. Y., was low bidder on 300 gals. disinfectant at 42c in a recent opening by the Treasury Procurement Division, Washington, D. C.

Toilet Soap Bid

Armour & Co. of Delaware bid low on 6,000 lbs. toilet soap at 7.5c in a recent opening by the Treasury Department, Procurement Division, Washington, D. C.

Grit Soap Bids

M. H. Fairchild & Bro., Chicago, submitted the low bid on 2,400 lbs. grit soap at 3.39c, fob works, while Day & Frick, Philadelphia, submitted a low bid on the same lot at 3.55c, delivered, Washington, in a recent opening by the Post Office Department, Washington, D. C.

Toilet Soap Bids

Kirkman & Son, Brooklyn, Lid low on 79,800 lbs. toilet soap, unwrapped, at 5.35c, fob works, in a

recent opening by the Post Office Department, Washington, D. C. In the same opening, Newell-Gutradt Co., San Francisco, submitted the low bid on 50,000 lbs. toilet soap, wrapped and sealed, at 6.06c, fob works.

Floor Wax Bid

Nielco Chemical Corp., Detroit, was low bidder on 1,600 gals. floor wax at 48.7c in a recent opening by the Post Office Department, Washington, D. C.

Soap & TSP Awards

Colgate-Palmolive-Peet Co., Jersey City, was awarded the contract on 10,000 cakes of toilet soap at 7.30c in a recent opening by the Army Quartermaster Corps at Jeffersonville, Ind. In the same opening Buckeye Soda Products Co., Cincinnati, was awarded the contract on 20,000 lbs. tri-sodium phosphate at 2.5c lb.

Soft Soap Award

R. M. Hollingshead Corp., Camden, N. J., was awarded the contract on 263,000 lbs. soft soap at 4.65c, fob plant, in a recent opening by the Army Air Corps at Wright Field, Ohio.

Shaving Soap Bid

Unity Sanitary Supply Co., New York, was low bidder on 500 packages shaving soap at 18c in a recent opening by the Treasury Procurement Division, Washington, D. C.

Panama Canal Bids

In a recent opening by the Panama Canal Supply division, Washington, D. C., the following low bids were submitted: by Colgate-Palmolive-Peet Co., Jersey City, 12,000 cakes toilet soap for \$125.06 and 18,000 lbs. salt-water soap for \$132; by Newell-Gutradt Co., San Francisco, 3,750 lbs. toilet soap for \$240.38 and 1,000 lbs. grit soap for \$44; by Stevens Soap Corp., Brooklyn, 2,000 lbs. scouring powder for \$90; by Armour & Co., Chicago, 18,750 lbs. laundry soap for \$573.75, 3,000 lbs. chip soap for \$138 and 20,000 lbs. soap powder for \$572, New York.

U.S.I. ALCOHOL NEWS

July



A Monthly Review of Technical Developments for Chemists and Executives



1940

ALCOHOL RECOMMENDED FOR LOTIONS



Alcohol's properties are put to good use in a new wave set lotion of high alcohol content. Alcohol makes the lotion evaporate more rapidly, eliminates the need of spending a long time under hair driers at high temperatures. Alcohol in lotions has desirable antiseptic properties.

ALCOHOL PLAYS IMPORTANT PART IN FLAVOR OF FOODS



The flavoring extracts that make food appetizing are prepared with the aid of pure alcohol. Estimated consumption of pure alcohol in the manufacture of vanilla, synthetic vanilla, and other flavoring extracts and essences is 2,000,000 gallons a year. (U.S.I. is the leading producer of pure alcohol.)

TECHNICAL DEVELOPMENTS

For further information write U.S.I.

A **solubilizing agent** makes it possible to prepare water solutions or dispersions of most resins, including balsams such as Peru and Tolu, it is claimed. (No. 350a)

A **label varnish** is said to protect labels against grease, oil, water, alcohol, and many chemicals. Maker recommends it as a primer on collapsible metal tubes. (No. 351a)

A **moisture register** is reported to determine moisture content of granular materials by testing the electrical resistance under controlled pressure. (No. 352a)

An **oil-proof floor mat** is said to provide a non-skid surface in oily locations. It is made with a synthetic rubber-like base that resists oil. (No. 353a)

A **new emulsifier** is said to be suitable for all products and processes where paraffin wax is used. Maker claims it produces stable emulsions spontaneously. (No. 354a)

Faster filtering is claimed for a new funnel with a bowl angle of 58° instead of the conventional 60°. Difference in angle between funnel and filter paper is said to create a natural suction. (No. 355a)

A **perfume base** is described as having an entirely original character, making the compounds in which it is used practically imitation-proof. Maker says it can be used in toilet waters, rouges, face powders, is being tested in creams. (No. 356a)

A **new aromatic** to replace heliotropin is said to be four times as strong, to resist a ka'i, and to be suitable for use in perfumes, soap, and lipstick. (No. 357a)

Doctors Call Effect Beneficial In Preparations for Skin, Hair

Use of alcohol in hair and skin lotions, astringents, and mouth washes produces definitely desirable results, in the opinion of many doctors. Alcohol is said to contribute considerably to the antiseptic and germicidal properties of such preparations. In astringents, alcohol acts both as vehicle and as an active ingredient. In hair washes, its fat-solvent properties are said to be desirable. Alcohol purity for these applications is essential—and quality of U.S.I. Alcohol and denaturants assures the desired properties.

TOILET SOAPS CALL FOR PUREST OF INGREDIENTS



Highest quality of materials must be used in toilet soaps to safeguard delicate skins. U.S.I. produces denatured alcohol in ten formulas authorized for use in manufacturing toilet soaps and bath salts—and careful testing and control insure the qualities needed in alcohol for this application. Typical of alcohol's uses in soap manufacture is a newly patented liquid antiseptic soap incorporating hardwood oils and alcohol.

EXTRACTS VITAMINS WITH ALCOHOL-WATER MIXTURE

MILWAUKEE, Wis.—A vitamin B complex having a good color and free from bitter tastes can be extracted from yeast with an alcohol-water mixture, it is claimed by an inventor here. Evaporation causes gummy material (source of bitterness) to rise to surface, from which it can be skimmed off, it is said.

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK



BRANCHES IN ALL PRINCIPAL CITIES

INDUSTRIAL ALCOHOL IN ALL GRADES AND ALL FORMULAS

New Trade Marks

The following trade-marks were published in the June issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

MOSQUIT-BAR—This in solid letters describing mosquito repellent. Filed by Charles Whitehead, Whitehead Laboratory, Sewaren, N. J., March 3, 1939. Claims use since June 1, 1932.

REGENT HOUSE—This in solid letters describing shampoo. Filed by Borun Bros., Los Angeles, Oct. 14, 1939. Claims use since Aug. 21, 1939.

NO-MOR-ANTS—This in reverse letters on scroll under drawing of ant describing ant preparation. Filed by Isabelle Allore, Belle Specialty Co., Lake Geneva, Wis., March 14, 1940. Claims use since May, 1934.

FORD—This in script letters describing metal polish and cleaner. Filed by Ford Motor Co., Dearborn, Mich., Dec. 30, 1939. Claims use since Feb. 6, 1939.

DISHEX—This in solid letters describing soapless dishwashing preparation. Filed by Leon Perloff, Squirtex Co., Philadelphia, March 13, 1940. Claims use since Oct. 1, 1939.

RIVAL—This in script letters describing soap. Filed by Joseph Metrie, Milwaukee, Wis., March 20, 1940. Claims use since March 14, 1940.

KOSO—This in outline letters describing washing powder. Filed by Rite Packing Corp., Lyndhurst, N. J., April 4, 1940. Claims use since June 5, 1939.

KLENZCRAFT—This in fancy letters describing soaps. Filed by United Buyers Corp., Foodcraft Products, Chicago, April 8, 1940. Claims use since Feb. 10, 1937.

WHITE LADY—This in outline letters with drawing of lady's head describing cleaner. Filed by Hower-ton Gowen, Roanoke Rapids, N. C., April 10, 1939. Claims use since Feb. 10, 1939.

DSK—This in solid letters describing soap flakes with bluing properties. Filed by Robert W. Burke, III, DSK Products Co., Philadelphia, March 6, 1940. Claims use since June 1, 1936.

BETRAMINE—This in solid letters describing soapless powders. Filed by Alframine Corp., New York, April 9, 1940. Claims use since Aug. 10, 1939.

CELANESE—This in solid letters describing soap. Filed by Celanese Corp. of America, New York, April 13, 1940. Claims use since April 12, 1940.

NALON—This in solid letters describing soapless cleaner. Filed by Naylee Chemical Co., Philadelphia, April 20, 1940. Claims use since April 12, 1940.

ROMANTIC DAYS—This in script letters describing shampoo. Filed by Lander Co., New York, Jan. 10, 1940. Claims use since Dec. 22, 1939.

PURIZED—This in solid letters describing antiseptic. Filed by Frank J. Sowa, Silbrite Chemical Co., New York, March 27, 1940. Claims use since Feb. 23, 1940.

PURATIZED—This in solid letters describing germicides. Filed by Frank J. Sowa, Silbrite Chemical Co., New York, March 27, 1940. Claims use since Feb. 23, 1940.

BLOTTO—This in fancy letters describing insecticides. Filed by John C. Mason, Creative Products Co., New York, April 22, 1940. Claims use since March 15, 1940.

SANAID—This in solid letters describing disinfectant. Filed by Cities Service Oil Co., Bartlesville, Okla., April 29, 1940. Claims use since Feb. 27, 1940.

VEECO—This in solid letters describing cleaners. Filed by American Products Co., Veeco Chemical Products Co., Cincinnati, May 15, 1939. Claims use since April 27, 1939.

POLDON—This in fancy letters describing cleanser. Filed by Slater Products Co., Pittsburgh, April 6, 1940. Claims use since April 1, 1939.

ELI—This in reverse letters on circle describing waterless cleanser. Filed by E. L. I. Products, Quincy, Ill., April 8, 1940. Claims use since April 3, 1940.

DUPLEX—This in solid letters describing shoe soap. Filed by Knomark Mfg. Co., Brooklyn, N. Y., April 8, 1940. Claims use since April 1, 1938.

FALSODENT—This in solid letters describing cleaner for false teeth. Filed by Falsodent Co., Brook- ing, N. Y., April 8, 1940. Claims use since Jan. 1, 1939.

SPRA KAST—This in solid letters describing germicides. Filed by Woburn, Inc., Brooksville, Fla., and Harrison, N. J., March 5, 1940. Claims use since April 22, 1939.

PERFEX—This in outline letters on banner describing disinfectant. Filed by Perfex Co., Tacoma, Wash., April 3, 1940. Claims use since Feb. 3, 1940.

DER-O-CIDE—This in solid letters describing insecticides. Filed by Derris, Inc., New York, April 17, 1940. Claims use since Feb. 1, 1940.

FYRE-FLY—This in stenciled letters describing insect spray. Filed by W. H. Barber Co., Minneapolis, April 20, 1940. Claims use since April 1, 1940.

LYSOL—This in script letters describing parasiticides. Filed by Lehn & Fink Products Corp., Bloomfield, N. J., May 11, 1940. Claims use since 1890.

OVIL-O—This in solid letters describing soap. Filed by Allen B.



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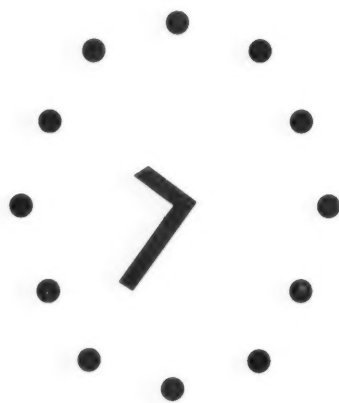
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Wrisley Co., Chicago. April 8, 1940. Claims use since April 2, 1940.

MOORE MARK—This in solid letters under large M's describing shaving soap. Filed by John H. Moore, Inc., New York. April 15, 1940. Claims use since March 16, 1940.

"CERT"—This in solid letters describing cleaning compound. Filed by Davies-Young Soap Co., Dayton, Ohio. April 27, 1940. Claims use since Feb. 2, 1940.

STRIFE—This in stenciled letters describing insect spray. Filed by W. H. Barber Co., Minneapolis. April 13, 1940. Claims use since April 1, 1940.

EPHY-FLUSH—This in solid red letters describing radiator cleaning compound. Filed by Epeco Chemical Co., Quincy, Mass., April 13, 1940. Claims use since Dec. 31, 1938.

PARAFROST—This in solid letters describing insecticides. Filed by J. Abramson & Sons., Inc., Brooklyn. April 16, 1940. Claims use since March 1, 1934.

DUS-COP—This in solid letters describing insecticides. Filed by General Chemical Co., New York. April 23, 1940. Claims use since March 26, 1940.

SOLCOPPER—This in solid letters describing insecticides. Filed by Sherwin-Williams Co., Cleveland. April 24, 1940. Claims use since Feb. 19, 1940.

NU-CLOZ—This in fancy letters describing clothes bleach. Filed by Recorg Supply Corp., Chicago. April 29, 1940. Claims use since March 1, 1938.

Trade Marks Granted

378.111. Floor wax. E. L. Bruce Co., Memphis. Filed Nov. 22, 1939. Serial No. 425.877. Published March 19, 1940. Class 16.

378.180. Floor dressing. Acme Chemical Co., Milwaukee. Filed Jan. 25, 1940. Serial No. 427.829. Published March 19, 1940. Class 16.

378.232. Shoe polish. Hecker Products Corp., New York. Filed March 31, 1939. Serial No. 417.689. Published Sept. 12, 1939. Class 4.

378.250. Soaps. Habow Chemicals, Inc., Conover, N. C. Filed Oct. 23, 1939. Serial No. 424.805. Published March 26, 1940. Class 4.

378.287. Soap powder. Hardin Chemical Co., New York. Filed Dec. 15, 1939. Serial No. 426.618. Published March 26, 1940. Class 4.

378.319. Soap. Lehn & Fink Products Corp., Bloomfield, N. J. Serial No. 427.507. Published March 19, 1940. Class 4.

378.349. Detergents. Caled Products Co., Brentwood, Md. Filed Jan. 30, 1940. Serial No. 428.017. Published March 19, 1940. Class 4.

378.350. Detergents. Caled Products Co., Brentwood, Md. Filed Jan. 30, 1940. Serial No. 428.018. Published March 19, 1940. Class 4.

378.358. Soaps. Alfred D. McKelvy Co., Minneapolis. Filed Feb. 5, 1940. Serial No. 428.244. Published March 26, 1940. Class 4.

378.414. Insecticides. Cedacote Products, Inc., New York. Filed April 25, 1939. Serial No. 418.674. Published June 13, 1939. Class 6.

378.415. Insecticides. Frieden Bros. & Co., Norfolk, Va. Filed April 27, 1939. Serial No. 418.774. Published June 13, 1939. Class 6.

378.426. Wood preservative. E. & F. King & Co., Boston. Filed June 29, 1939. Serial No. 421.088. Published March 26, 1940. Class 6.

378.436. Germicides. Video, Inc., Bloomfield, N. J. Filed Aug. 28, 1939. Serial No. 423.078. Published April 2, 1940. Class 6.

378.452. Insecticides. O'Cedar Corp., Chicago. Filed Oct. 23, 1939. Serial No. 424.821. Published Mar. 5, 1940. Class 6.

378.454. Insect spray. Interstate Drug Corp., Chicago. Filed Oct. 30, 1939. Serial No. 425.055. Published March 26, 1940. Class 6.

378.513. Detergents. Alrose Chemical Co., Cranston, R. I. Filed Dec. 30, 1939. Serial No. 427.002. Published March 5, 1940. Class 6.

378.514. Wetting agents. Alrose Chemical Co., Cranston, R. I. Filed Dec. 30, 1939. Serial No. 427.003. Published March 5, 1940. Class 6.

378.542. Insecticides. C. B.

Dolge Co., Westport, Conn. Filed Jan. 12, 1940. Serial No. 427.368. Published March 19, 1940. Class 6.

378.575. Antiseptic. J. E. Hough & Sons, Manchester, Tenn. Filed Jan. 19, 1940. Serial No. 427.369. Published April 2, 1940. Class 6.

378.583. Insecticides. Sinclair Refining Co., New York. Filed Jan. 24, 1940. Serial No. 427.823. Published April 2, 1940. Class 6.

378.584. Insecticides. Sinclair Refining Co., New York. Filed Jan. 24, 1940. Serial No. 427.824. Published April 2, 1940. Class 6.

378.586. Mooth-proof. Geigy Co., New York. Filed Jan. 25, 1940. Serial No. 427.840. Published March 5, 1940. Class 6.

378.624. Liquid wax. Davies-Young Soap Co., Dayton, Ohio. Filed Feb. 1, 1940. Serial No. 428.109. Published March 26, 1940. Class 16.

378.734. Shaving cream. Trade Laboratories, Inc., Newark. Filed Nov. 18, 1939. Serial No. 425.820. Published April 9, 1940. Class 4.

378.756. Cleaner. Socony-Vacuum Oil Co., New York. Filed Jan. 5, 1940. Serial No. 427.172. Published April 2, 1940. Class 4.

378.785. Soaps. Roger & Gallet, New York. Filed Jan. 23, 1940. Serial No. 427.792. Published April 9, 1940. Class 4.

378.824. Soap. C. B. Dolge Co., Westport, Conn. Filed Feb. 14, 1940. Serial No. 428.544. Published April 9, 1940. Class 4.

378.881. Soap. United Cigar-Whelan Stores Corp., New York. Filed Nov. 8, 1938. Serial No. 412.529. Published May 2, 1939. Class 4.

378.915. Woodwork polish. Soil-Off Mfg. Co., Glendale, Calif. Filed Nov. 21, 1939. Serial No. 425.863. Published April 9, 1940. Class 16.

378.979. Paint cleaner. Louis T. Larson, Stanton, Iowa. Filed Feb. 8, 1940. Serial No. 428.360. Published April 16, 1940. Class 4.

378.981. Auto cleaner. Alfred Zinker, New York. Filed Feb. 5, 1940. Serial No. 428.274. Published April 16, 1940. Class 16.

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you simply raise the handy lever and the cap lifts right off.



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"We really expected to pay more"
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Raw Material Markets

As of June 27, 1940

NEW YORK—In the soap raw material markets during June, prices of animal and vegetable oils and fats continued to move fractionally downward in general, tallow, greases, fatty acids and corn oil all being quoted at lower levels. Many essential oil prices were advanced sharply following the closing of the Mediterranean to commerce and other developments in the European war which cut off shipments of Italian orange and lemon oils, bergamot oil, bitter almond oil, lavender, caraway seed oil and other European materials. Olive oil prices jumped to still higher levels when Italy's long expected move became a fact. Quotations on all grades of carnauba wax fell gradually all during this period with all signs indicating a continued downward trend. Insecticide materials also dropped to lower levels, as did the African and refined yellow grades of beeswax. Chemical prices exhibited no important changes.

Animal Fats

Prices of animal fats moved downward this period, with current quotations for grease and tallow holding slightly under the levels of a month ago. Lard, also quoted at fractionally lower levels, showed indications of strength late in the period. The general dullness of the market has been the result of buyers holding off while waiting for developments in the European situation. Higher prices are in the offing, according to some authorities who believe commodity prices will take an upward trend in the near future.

Olive Oil

Denatured olive oil prices were advanced another 25 cents this period to be quoted currently at \$1.50 a gallon as supplies were cut off at

the source. Small quantities of inedible olive oil were sold at \$1.35 late in the month by some sellers who were anxious to take profits. Importers, however, would not sell at this price and could see no reason for easing off. There are indications that the inedible olive oil used in soap will be replaced to a great extent by the lower grades of domestic vegetable oils.

Coconut Oil

No important changes occurred in crude coconut oil prices this period. Manila coconut oil in tank cars is quoted currently at 3 cents a pound. Pacific Coast futures remained at last month's level of 2½¢.

Citrous Oils

Italian orange oil prices were almost doubled this period, rising from last month's level of \$3.80 to \$5 a pound to be quoted at a current level of \$7.50 a pound to nominal. The advance in price of the Italian product occasioned an increase of 15¢ a pound in California orange oil which is currently quoted at \$1.40 to \$1.75. Italian lemon oil was advanced 90 cents a pound to a current price range of \$4.75 to nominal. California lemon oil was advanced 25 cents a pound this period. Bergamot oil prices continued to soar; small spot stocks are being closely held at \$8.50 a pound to purely nominal prices with no shipment offerings available.

Lavender Oil

Lavender prices went up 75 cents a pound this period to a range of \$3.25 to \$3.55. Further increases in lavender and other floral oils seem to be forecast by conditions in French producing areas.

Pyrethrum

Prices of insecticide raw materials dropped off again this period.

Insect powder fell to a range of 27 to 31 cents a pound; 5% derris to a range of 21 to 25 cents a pound; and 5% cube to a level of 20 to 24 cents a pound. Pyrethrum extract, 20 to 1, was quoted by some sellers as low as \$5.50 a gallon.

Carnauba Wax

Quotations on carnauba wax fell 3 to 6 cents this period, depending on grade and seller. Reports from Brazil on the new crop should make this market somewhat easier, although prices still remain high in comparison to the situation of a year ago. The No. 1 grade has dropped to a level of 69 to 71 cents a pound. No. 2, North Country is currently quoted at 64 to 65 cents a pound.

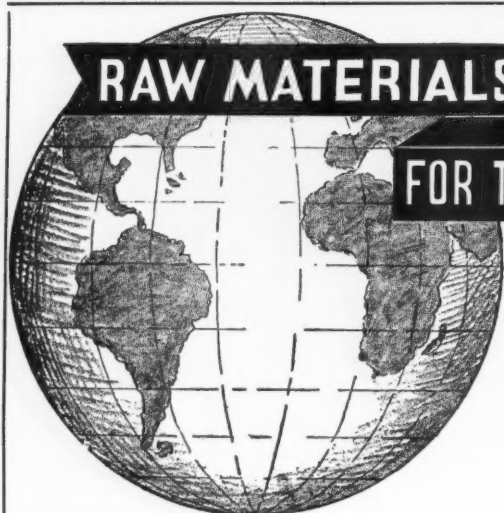
Soap Fat Consumption

(From Page 35)

still low when compared to the consumption figures prior to 1936 and the Spanish war. Before 1936, the use of olive foots by the American soap industry was approximately 30,000,000 pounds a year. Since 1936 available stocks declined steadily until 1939, which year seems to mark a reversal of the downward trend in the consumption of olive foots.

Linseed oil consumption increased by 22 per cent as a soap stock in 1939, accounting for 1,780,000 pounds as compared to 1,455,000 pounds for the previous year.

All other oils and fats used by the soap industry in 1939 accounted for only 0.6 per cent of the total factory consumption. This includes castor oil, peanut oil, edible olive oil, sesame oil, perilla oil, and other vegetable oils, as well as edible tallow, edible animal stearin, oleo oil, lard, and neat's foot oil. Total consumption of the above-mentioned oils and fats by soapers amounted to 10,006,000 pounds in 1939.



RAW MATERIALS

1838-1940

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Petrolatums

Mineral Oils
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Petrolatums
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Sesame Oil
Soya Bean Oil
Teaseed Oil

Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein
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Caustic Soda
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Raw Material Prices

(As of June 27, 1940)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities

Chemicals

Acetone, C. P., drums	lb.	\$.07½	\$.08
Acid, Boric, bbls., 99½%	ton	106.00	138.00
Cresylic, drums	gal.	.68	.70
Low boiling grade	gal.	.68	.70
Muriatic, C. P., carboys	lb.	.08	—
Oxalic, bbls.	lb.	.10¾	.12
Adeps Lanae, hydrous, drums	lb.	.24½	.25
Anhydrous, drums	lb.	.26½	.27
Alcohol, Ethyl, U.S.P., bbls.	gal.	4.55	4.61½
Complete Denat., SD 1, drums, ex. gal.		.28½	.34½
Alum. Potash lump, bbls.	lb.	.04	—
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls.	lb.	.08	—
Bentonite, 1, works, 325 mesh	ton	—	16.00
Bentonite, 2, works, 200 mesh	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.00	3.35
Borax, pd., cryst., bbls., kegs	ton	58.00	74.00
Carbon Tetrachloride, car lots	gal.	.66½	1.10
L. C. L.	gal.	.73	1.20
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	26.00
Cresol, U.S.P., drums	lb.	.09¾	.10¼
Creosote Oil	gal.	.13½	.14½
Feldspar, works	ton	32.00	35.00
(200 to 325 mesh)			
Formaldehyde, bbls.	lb.	.05½	.06
Fullers Earth	ton	15.00	—
Glycerine, C.P., drums	lb.	.12½	.13
Dynamite, drums	lb.	—	Nom.
Saponification, drums	lb.	.08¾	.09
Soap, lye, drums	lb.	.07¾	.08¼
Hexalin, drums	lb.	.30	—
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	—	2.45
Mercury Bichloride, kegs	lb.	2.24	2.39
Naphthalene, ref. flakes, bbls.	lb.	.06¼	.07
Nitrobenzene (Mirbane) drums	lb.	.08	.09
Paradichlorobenzene, drums	lb.	.12½	.15½
Petrolatum, bbls. (as to color)	lb.	.04¼	.08
Phenol (Carbolic Acid), drums	lb.	.13	.14¾
Pine Oils, bbls.	gal.	.50	.59
Potash, Caustic, solid	lb.	.06¼	.06¾
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03½	.03¾
Potassium Carbonate, solid	lb.	.06½	.06¾
Liquid	lb.	.02¾	.03½
Pumice Stone, powder	100 lb.	3.50	4.50
Rosins (600 lb. bbls. gross for net)—			
Grade D to H, basis 280 lbs.	bbl.	4.60	5.27½
Grade I to N	bbl.	5.27½	6.15
Grade WG to X	bbl.	6.45	7.20
Wood	bbl.	3.75	5.25
Rotten Stone, pwd., bbls.	lb.	—	—
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04¼	.04½
Olive Castile, bars	lb.	.17	—
Olive Castile, powder	lb.	.26	.29
Powdered White, Neutral	lb.	.19	.21
Olive Oil Foot, bars, 68-70%	lb.	.09	—
Green, U.S.P.	lb.	.08	.09
Tallow Chips, 88%	lb.	.07¼	.07¾

Soda Ash, cont., wks., bags, bbls.	100 lb.	1.10	1.35
Carlots, in bulk	100 lb.	.90	.95
Soda Caustic, cont., wks., solid	100 lb.	2.30	—
Flake	100 lb.	2.70	2.95
Liquid, tanks, 47-49%	100 lb.	1.95	—
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	15.00	15.60
Sodium Fluoride, bbls.	lb.	.07	.08¼
Sodium Hydrosulfite, bbls.	lb.	.16	.17
Sodium Metasilicate, ground	100 lb.	3.75	4.80
Crystalline	100 lb.	2.35	3.35
Sodium Pyrophosphate	100 lb.	5.10	5.30
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.22	.28
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	lb.	.0225	.0245
Zinc Oxide, lead free	lb.	.06½	.07¾

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.05¾	.06
Castor, No. 1, bbls.	lb.	.13¼	.13¾
No. 3, bbls.	lb.	.12¾	.13¼
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.02¾	.03
Tanks, Pacific Coast, futures	lb.	.02½	.02¾
Copra, bulk, coast	lb.	.0145	.0150
Corn, tanks, mills	lb.	.05½	.05¾
Cottonseed, crude, tanks, mill	lb.	.06¼	—
PSY, futures	lb.	.06	.06¾
Fatty Acids—			
Corn Oil, tanks	lb.	.06¾	.07¼
Coconut Oil, tanks, Twitchell	lb.	.08½	.09½
Cotton Oil, tanks	lb.	.06½	.06¾
Settled soap stock, Chicago	lb.	.03	.03¼
Boiled soap stock, 65%, Chi.	lb.	.04	.04¼
Foots, 50%, Chicago	lb.	.01¾	.02
Red Oil, bbls., dist. or sapon.	lb.	.06¾	.07¼
Tanks	lb.	.06	.06¼
Stearic Acid,			
Double pressed	lb.	.09¾	.10¾
Triple pressed	lb.	.12¼	.13½
Greases, choice white, tanks, Chi.	lb.	.04¼	.04¾
Yellow	lb.	.03¾	—
Lard, city	lb.	.05½	.06
Linseed, raw, bbls.	lb.	.1000	.1040
Tanks, raw	lb.	.0900	.0920
Olive, denatured, bbls., N. Y.	gal.	1.50	Nom.
Foots, bbls., N. Y.	lb.	.09¼	Nom.
Palm, Sumatra, cif. New York	lb.	.02¼	.02½
Palm, kernel, shipment	lb.	No Prices	
Soya Bean, domestic, tanks, crude	lb.	.06½	—
Stearine, oleo, bbls.	lb.	.05¾	—
Tallow, special, f.o.b. plant	lb.	.04¼	—
City, ex. loose, f.o.b. plant	lb.	.04¼	—
Teaseed Oil, crude	lb.	.12	.12½
Whale, refined	lb.	.0910	—

CRESYLIC ACID — FORMALDEHYDE AROMATICS

Phenyl Ethyl Alcohol
Methyl Acetophenone
Acetophenone
Geranyl Acetate
Yara Yara

Phenyl Ethyl Acetate
Amyl Cinnamic Aldehyde
Benzyl Acetate
Benzophenone
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Chicago Office: 130 N. State St.

(As of June 27, 1940)

Essential Oils

Almond, Bitter, U.S.P.	lb.	\$2.75	\$3.25
Bitter, F.F.P.A.	lb.	3.00	3.25
Sweet, cans	lb.	.75	.80
Anise, cans, U.S.P.	lb.	.70	.75
Bay, cans	lb.	1.20	1.25
Bergamot, coppers	lb.	8.50	Nom.
Artificial	lb.	1.35	3.00
Birch Tar, rect., cans	lb.	.75	.80
Crude, dms.	lb.	.25	.26
Bois de Rose, Brazilian	lb.	1.60	1.65
Cayenne	lb.	1.70	1.80
Cade, cans	lb.	.55	.65
Cajeput, native, cans	lb.	.67	.71
Calamus, cans	lb.	8.25	8.50
Camphor, Sassy, drums	lb.	.30	.32
White, drums	lb.	.33	.35
Cananga, native, cans	lb.	1.60	1.75
Rectified, cans	lb.	2.00	2.35
Caraway Seed	lb.	4.50	Nom.
Cassia, Redistilled, U.S.P.	lb.	1.25	1.30
Cedar Leaf, cans	lb.	.80	.85
Cedar Wood, light, drums	lb.	.22	.24
Citronella, Java, drums	lb.	.37	.38
Citronella, Ceylon, drums	lb.	.42	.43
Clove, U.S.P., cans	lb.	1.30	1.35
Eucalyptus, Austl., U.S.P., cans	lb.	.69	.72
Fennel, U.S.P., cans	lb.	1.90	2.00
Geranium, African, cans	lb.	2.75	3.10
Bourbon, cans	lb.	2.75	3.10
Turkish	lb.	2.25	2.50
Hemlock, tins	lb.	.80	.85
Lavender, U.S.P., cans	lb.	3.25	3.55
Spike, Spanish, cans	lb.	1.20	1.85
Lemon, Ital., U.S.P.	lb.	4.75	Nom.
Cal.	lb.	3.10	3.25
Lemongrass, native, cans	lb.	.85	.90
Linaloe, Mex., cases	lb.	1.30	1.45
Nutmeg, U.S.P., cans	lb.	2.60	2.70
Orange, Sweet, W. Ind., cans	lb.	2.00	2.75
Italian cop	lb.	7.50	Nom.
Distilled	lb.	.90	—
California, expressed	lb.	1.40	1.75
Origanum, cans, tech.	lb.	1.50	1.80
Patchouli	lb.	7.50	8.00
Pennyroyal, dom.	lb.	3.00	Nom.
Imported	lb.	2.25	2.50
Peppermint, nat., cans	lb.	2.70	2.95
Redis., U.S.P., cans	lb.	2.95	3.20
Petitgrain, S. A., cans	lb.	1.55	1.60
Pine Needle, Siberian	lb.	1.35	1.50
Rosemary, Spanish, cans	lb.	.67	.68
drums	lb.	.62	.63
Sandalwood, E. Ind., U.S.P.	lb.	5.25	5.50
Sassafras, U.S.P.	lb.	1.15	1.20
Artificial, drums	lb.	.70	.71
Spearment, U.S.P.	lb.	2.25	2.30
Thyme, red, U.S.P.	lb.	.80	1.75
White, U.S.P.	lb.	.95	1.95
Vetivert, Bourbon	lb.	8.50	15.00
Ylang Ylang, Bourbon	lb.	4.25	6.50

Aromatic Chemicals

Acetophenone, C. P.	lb.	\$1.60	—
Amyl Cinnamic Aldehyde	lb.	1.70	\$2.00
Anethol	lb.	1.10	1.15
Benzaldehyde, tech.	lb.	.55	.60
U.S.P.	lb.	.85	1.15
Benzyl, Acetate	lb.	.44	.49
Alcohol	lb.	.63	.68
Citral	lb.	1.40	3.10
Citronellal	lb.	.75	.80
Citronellol	lb.	1.60	1.85
Citronellyl Acetate	lb.	4.00	7.00
Coumarin	lb.	2.75	3.00
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.50	.55
Eucalyptol, U.S.P.	lb.	.80	.85
Eugenol, U.S.P.	lb.	1.75	2.00
Geraniol, Domestic	lb.	.60	3.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	1.20	2.50
Heliotropin	lb.	3.00	3.20
Hydroxycitronellal	lb.	2.00	2.50
Indol, C. P.	lb.	32.00	34.00
Ionone	lb.	2.50	4.15
Iso-Eugenol	lb.	2.80	4.25
Linalool	lb.	2.10	3.30
Linalyl Acetate	lb.	2.50	3.00
Menthol	lb.	2.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.25
Paracresol	lb.	4.50	6.00
Salicylate, U.S.P.	lb.	.35	.37
Musk Ambrette	lb.	3.65	3.95
Ketone	lb.	3.70	4.10
Xylene	lb.	1.05	1.20
Phenylacetaldehyde Sp.	lb.	2.10	2.50
Phenylacetic Acid	lb.	1.75	3.00
Phenylethyl Alcohol	lb.	2.50	3.35
Rhodiol	lb.	5.55	10.80
Safrol	lb.	1.00	1.10
Terpineol, C. P., drs.	lb.	.25	—
Cans	lb.	.28	—
Terpinyl Acetate, 25 lb. cans	lb.	.82	.85
Thymol, U.S.P.	lb.	1.55	1.60
Vanillin, U.S.P.	lb.	2.50	2.75
Yara Yara	lb.	1.55	1.80

Insecticide Materials

Insect Powder, bbls.	lb.	.27	.31
Pyrethrum Extract			
5 to 1	gal.	1.50	1.75
20 to 1	gal.	5.50	6.00
30 to 1	gal.	8.10	8.75
Derris, powder—4%	lb.	.17	.20
Derris, powder—5%	lb.	.21	.25
Cube, powder—4%	lb.	.16	.19
Cube, powder—5%	lb.	.20	.25

Gums

Arabic, Amb. Sts.	lb.	No Prices
White, powdered	lb.	No Prices
Karayac, powdered No. 1	lb.	.14 .33
Tragacanth, Aleppo, No. 1	lb.	No Prices
Flake	lb.	No Prices

Waxes

Bees, white	lb.	.35	.37
African, bgs.	lb.	.23	.24
Refined, yel.	lb.	.29	.31
Candelilla, bgs.	lb.	.18½	.19
Carnauba, No. 1, yellow	lb.	.69	.71
No. 2, N. C.	lb.	.64	.65
No. 3, Chalky	lb.	.53	.56
Ceresin, yellow	lb.	.11½	.15
Paraffin, ref., 125-130	lb.	.0675	.0680



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A SPECIAL grade of Nuchar Activated Carbon has been developed which has been found to be very effective on fats used in the manufacture of high grade soaps. Application of this grade of Nuchar to the unrefined tallow and coconut oil eliminates the costly neutralization process in that Nuchar removes the undesirable bodies by adsorption. The finished soap, so produced, has increased keeping quality as measured by color reversion, odor and spotting.

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Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Rapid Dissolving Soaps

THERE is a distinct place for packaged soap in finely divided form such that it will dissolve almost instantly in water. A difficulty in getting a suitable particle shape is that they may break down into a fine powder. This is undesirable as the soap should not stick together in lumps when shaken into the water. Soap flakes have been made for this purpose but too often these break up in the package and give off a fine dust when shaken out which is unpleasant on the membrane of the nose. Also flakes may stick together, making it difficult to shake out the desired amount and forming clumps in the water which present a small surface area in comparison with that of the individual flakes, which defeats the original purpose of the product.

Small hollow balls or pearls of soap have also been prepared. Only one side, that is the outer wall, of the individual pearls comes into contact with water so that solution is not particularly rapid, unless the wall of the bead is made exceedingly thin. This results in poor mechanical resistance so that the beads easily break up in the package, again giving an undesirable soap dust. Soap filaments, when sufficiently thin to dissolve quickly, give the same trouble.

A new method is to prepare soap in the form of small hollow tubes. These can be cut into short lengths, preferably in a semidried condition. The tubes should be thin-

walled, not over 0.3 mm. wall thickness. Such thin-walled tubules dissolve very quickly in water, as the water is in contact with both the inside and the outside of the tube at the same time. In addition the tubes possess sufficient mechanical strength and stiffness that they are not easily broken. The tubes do not easily clump together as plenty of air space is left between the individual particles. Machinery is described for the preparation of soap in this form, which can be either round like macaroni or flattened. The machinery is so designed that the diameter of the tubes and the thickness of the wall can be kept constant. Swift & Company. German Patent No. 685,858.

The British Pharm. Codex solution of coconut oil soap becomes cloudy. Filtration yields only temporary clarity and this at the expense of the soap content. The difficulty is due to the use of caustic soda in the Codex formula. The following formula gives a solution that remains sufficiently clear to filter bright, without undue loss of soap: Coconut oil, 5 lbs.; caustic potash, 1 lb.; oil of lavender to suit, and distilled water to 18 pints. Melt the oil, add 35 ozs. of caustic potash solution containing 1 lb. of potash, mix thoroughly, keep warm for a week, add the rest of the distilled water, dissolve by heating without boiling and place the warm solution in separators. When the separation is completed 24 hours

later, draw off the clear soap solution, filter through filter paper, add the preservative and bottle. Charles Spain. *Chem. Products* 3, 31-2 (1940).

A bar of milled toilet soap having floating properties is made by inserting displacing means in a blank bar of plodded milled soap, from opposite ends. Cavities open at one end are formed in the soap in this way, the bar is stamped before the displacing means are removed. The latter are afterward withdrawn and the outer edges of the bar stamped, the open ends of the cavities being closed with soap by this means. The hollow spaces are of sufficient size to reduce the apparent specific gravity of the soap to less than that of water. The Procter & Gamble Co. of Canada, Ltd. Canadian Patent No. 388,565. A soap press for producing the buoyant soap cake described above has been patented by R. A. Jones. Canadian Patent No. 388,903.

Numerous curves are given to show the relative decreases of tensile strength and the degree of cellulose polymerization produced by washing cotton and two types of cellulose staple rayon up to 50 times with various soaps plus soda ash and plus oxidant detergent solutions. It is concluded that cellulose polymerization is a satisfactory criterion of the durability of a staple rayon material although refinement of the Staudinger method of determination

is desirable. Oxidizing detergents deteriorate staple rayon and are not recommended for general use. H. Böhringer and H. Seyfert. *Melliand Textilber.* 20, 353-5; through *Chem. Abs.*

Bottle-rinsing Problems

The first rinse of bottles at 77°F. will remove about 94 per cent of the residual alkali, the second rinse an additional 2-3 per cent. Carbonate, phosphate and silicate were removed from the bottle more easily than caustic. High-temperature rinses were more effective in removing residual alkali than lower-temperature rinses. Anything added to the washing solution that caused foaming resulted in higher retention of alkali in the bottle. The rinsing of mixtures of caustic with milder alkalies is no different from the rinsing of straight caustic solution. Certain organisms suspended in alkalies have an affinity for the glass surface of the bottle and are not removed as effectively in rinsing as is the alkali. This is particularly true with phosphates and silicates. Joseph H. Hale. *Can. Dairy and Ice Cream J.* 19, No. 2, 52-4 (1940); through *Chem. Abs.*

Continuous Process White Soap

White soap is made by a continuous process which consists of passing a stream of a mixture of fatty material and saponifying agent through a coil at a relatively low temperature. Substantially complete saponification is obtained at a temperature below that at which discoloration of fat would occur. The resultant mixture is transferred without exposure to air to a separate and independent high-temperature coil where a temperature is maintained substantially above the melting point of the soap when anhydrous. The mixture is next passed in a stream from the high-temperature coil to a vapor-separating zone where vaporized materials are removed and from which molten or plastic anhydrous soap is likewise removed.

In the process the temperature is adjusted for the different steps in such a way as to prevent discolora-

tion, to remove all of the glycerine, and to prevent access to oxygen during transfer from one step to another. A suitable pump permits control of conditions in each zone. Refining Inc. British Patent Spec. 519,565; through *Perfumery & Essential Oil Record* 31, 176 (1940).

Evaluating Detergency

A practical method of measuring cleansing action is by determining the insoluble dirt in the spent wash liquors from soiled linen. Batches up to 6 kg. can be so studied, and results of various factors obtained such as the time of washing, presence of soap assistants, effect of pre-soak-

ing, etc. It is confirmed that practically the full soil-removing action of a charge of wash liquor is exerted within about 5-10 minutes. W. Kind and O. Oldenroth. *Fette und Seifen* 46, 292-9; through *Chem. Abs.*

Shaving Soap Ingredient

A saponaceous shaving substance soluble in lipoids is derived from soybeans by treating them with petroleum ether, ether, benzene or benzene, adding ethyl alcohol or acetone to the solution, and recovering the lipid-soluble substance. Hugo Kröper and Erich Thomae. U. S. Patent No. 2,185,255; through *Chem. Abs.*

Laundry Sours

OF the operations carried out in the ordinary white-work washing formula, souring is the one most frequently misunderstood and misapplied. The degree of success of souring is not readily apparent to the eye, both over- and under-souring may occur without markedly affecting the apparent quality of the work produced.

The practice of preparing a stock solution of a sour is a good one, and for this purpose the use of ammonium silicofluoride or ammonium acid fluoride is recommended. A solution made up to contain 1 pound per gallon is suitable. Such a solution should be kept in a wooden container and should not be allowed to come in contact with iron. Although sodium silicofluoride is probably the cheapest sour to use its solubility is very low so that a very large amount of stock solution would have to be prepared.

The amount of sour to be added depends on the amount of alkali remaining in the load at the end of the last rinse and on the bicarbonate alkalinity of the water added to the wheel during the souring operation. For low bicarbonate water showing a titration of not more than 5 drops of 0.1 Normal acid per 50 cc., the bicarbonate alkalinity may be neglect-

ed and an amount of sour equivalent to 1.25-1.5 ounces of sodium silicofluoride used per 100 pounds of work. This will usually give a pH of 4.5-5.0.

With waters of high bicarbonate alkalinity, it is necessary to make a correction. One drop of 0.1 Normal acid per 50 cc. of sample is equivalent to 0.13 ounces of sodium bicarbonate per 100 Imperial gallons of water. The amount of sour needed to neutralize the alkalinity of the water can be calculated provided the amount of water in the wheel is known. The ounces of sour required per ounce of sodium bicarbonate is 0.56 oz. of sodium silicofluoride, 0.42 oz. of ammonium silicofluoride, or 0.68 oz. of ammonium acid fluoride. Souring is advisable before bluing in most cases. Exceptions are in cases of high bicarbonate alkalinity. C. H. Bayley. *Laundry and Dry Cleaning J. of Canada* 1939, 397-900.

A bleaching or sterilizing agent of high active chlorine content is prepared by evaporating a mixture of urea and hydrochloric acid to substantial dryness and chlorinating the resultant product. Irving E. Muskat and Fred C. Trager. U. S. Patent No. 2,185,864; through *Chem. Abs.*

Alumina Emulsifiers

ALTHOUGH large numbers of organic compounds have been patented as emulsifying agents, very few of these are being actively exploited today and fundamentally little real advance has been made in emulsion technique. Except in the manufacture of bituminous emulsions using colloidal clays, the feasibility of using inorganic substances as emulsifiers seems generally to have been overlooked.

The discovery and development of inert alumina gel¹ as an emulsifying, wetting and suspending agent is to be regarded as a definite advance in emulsion practice. Inert alumina gel is a white gelatinous paste consisting of hydrated alumina and water. Standard concentrations of aluminum oxide are available. A common figure of 12.5 per cent, determined by ignition, represents the highest value consistent with ready dispersion of the material and retention of its fundamental properties. This latter point is an important one, because continued abstraction of water may lead to loss of emulsifying efficiency. The process of dehydration beyond a certain stage is irreversible and the completely dry end product is quite useless.

The preparation of inert alumina gel may be carried out in a variety of ways. Aluminum hydroxide may be precipitated in the normal manner from aluminum sulfate by the action of caustic soda, the precipitate thoroughly washed by decantation or filtration, and subjected to prolonged boiling or exposure to ultraviolet light. Treated aluminum hydroxide becomes exceedingly unreactive chemically, its insolubility in concentrated hydrochloric acid being perhaps one of its most striking manifestations of acquired inertness.

¹T. W. Dickeson, British Patent No. 487,855 (1938).

Emulsions made with alumina gel are consistently of the oil-in-water type. They are stable under the most widely differing conditions and in the presence of a great variety of substances generally regarded as emulsion breakers. Even after years of standing many of the emulsions show no separation of free oil. They are also resistant to extreme temperature changes and to changes in pH.

The ease with which emulsions may be prepared is illustrated by castor-oil emulsion. The emulsifying agent is dispersed either by shaking or working up with water with a high-speed stirrer, to yield a uniform suspension which need contain no more than 0.5 per cent of aluminum oxide (ignited weight). The suspension is then warmed slightly and the whole of the oil phase added, also warmed to about 40-50°C. The rough emulsion obtained by stirring is then passed through a homogenizer. Particle sizes approximate 3-7 microns. The stability of the emulsion is brought about by the formation of a film of alumina around the oil droplets at the oil-water interface.

Inert alumina gel can be used as emulsifying agent with widely different oils and fats, as well as with waxes. Successful applications have been made with agricultural insecticides and with wax emulsions used in the textile industry. Many other applications await development. H. L. Bennister, *Manufacturing Perfumer* **11**, 103-5 (1940).

Soap Preservatives

Any number of compounds have been suggested as antioxidants or preservatives for use in soap. Among them is *para*-methyl hydroxybenzoate, which has general antiseptic properties and is particularly recommended in soap containing some decomposable addition. For this

purpose 0.15 of the benzoate compound is used. The compound has no antioxidant properties and so is sometimes supplemented by a small amount of a reducing agent such as sodium thiosulfate. Stannous naphthenate is said to act as an antioxidant when present in soap to the extent of 0.1 per cent. Similar effects are claimed for other salts of naphtheneic acid, including the potassium, magnesium, and mercury salts. J. Augustin, *Am. Perfumer* **40**, No. 4, 53-5 (1940).

Washing Agents

Water-soluble hydroxydiaryl methane derivatives are prepared by condensing the reaction products of excess alkali bisulfite on unsaturated aliphatic aldehydes or ketones with nuclear alkylated phenols or their halogen substitution products. Among examples, 90 per cent sulfuric acid is added with stirring to *para*-diisobutylphenol dissolved in glacial acetic acid and then the reaction product of acrolein and sodium bisulfite is added, the condensation product becoming water-soluble after some hours stirring. After separation of sulfuric acid by pouring into brine, the viscous sulfonic acid is neutralized with soda lye and a bright powdery product obtained that has excellent wetting properties. J. R. Geigy A.-G. British Patent No. 509,096; through *Chem. Abs.*

Adsorption Spectrum of Fats

Investigations have shown that it is possible to determine, on the basis of the adsorption spectrum, the animal sources of different fats. The detection of tallow in lard has been determined more definitely than was previously possible. The fatty acids from tallow show a different adsorption spectrum than do the fatty acids of lard, due to the presence of characteristic constituents from the muscle tissue associated with the different fats. Tallow in an amount of 5 per cent can be detected in lard. It is hoped that the method can be applied to other fat mixtures. Grassie Saponi; through *Allgemeine Oel- und Fett-Ztg.* **37**, 50 (1940).

PQ SOLUBLE SILICATES A "TONIC" TO SALES

2

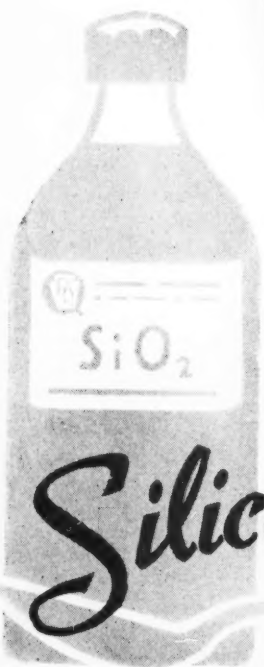
Better Dirt Removal. Heavily soiled cotton fabric before and after washing with silicated builder and soap. No bleach used. The SiO_2 in silicates protects against redeposition of dirt.

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Same quantity water and soap in each jar. Two teaspoonfuls caustic to left hand jar, two of silicate to right hand jar. Shaking produced suds shown. In right jar, suds rose to cap and remained stable. The silica in PQ Silicates improves sudsing action in your detergents.

1

Greater Dirt Suspension
Solid dirt is held in suspension by soluble silica. This is shown above. Right: Water and manganese dioxide. Left: Water, .025% silicate and manganese dioxide. After 12 days.



PQ Soluble Silicates of Soda add greater efficiency to your soaps and cleansers. And one outstanding reason is this little symbol SiO_2 , which you know chemically stands for silica content.

Silicate of Soda

PHILADELPHIA QUARTZ COMPANY

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Chicago Sales Office: Engineering Bldg. Sold in Canada by National Silicates Ltd., Toronto, Ont.

The correctly proportioned amount of silica in sodium silicate builds these three illustrated qualities into your soap and cleansers.

All are yours at low cost. You get more detergent values from PQ Silicates per pound than from other known salts, and so do your customers. They measure the improved cleaning in whiter whites, brighter colors, sparkling dishes, etc.

Let's talk over the role of silica and its relation to your formulas, whatever the ingredients may be.

Products and Processes

Powdered Soap Made with Gas

A light fluffy powdered soap is made by spray-drying in a current of air mixed with the products of combustion of gas at 255°F. Soap made in the usual way, but without additions other than preservative to prevent rancidity, is conditioned at the desired temperature by the use of steam coils. It is then passed through a low-pressure pump to give a spraying pressure of 1,000 to 3,000 lbs. per sq. in., then through a "saponifying valve" and finally through a spray nozzle having a 0.036-inch opening. The spray chamber is shaped very much like a centrifugal collector of the cyclone type. The liquid soap is dried almost instantly and is sucked by a fan into cooling and storing collectors. About 1.5 cubic feet of natural gas was used per pound of finished soap. Victor M. Alexieff. *Gas* 16, No. 3, 17 (1940).

Stamping Soap

The adhesion of cut soap to metal in the process of stamping in the continuous process of production can be reduced to a minimum by drying the cakes 20 minutes at 20-25°C. in an air current at the velocity of 5-5.5 meters per second or by storing two hours at 25°C. With greater contents of fatty acids in soap the adhesion decreases and the impression of the stamping design improves. Hot drying enhances the adhesion and friction of soap. E. Shevlyagina, L. Brusenskaya and G. Borodina. *Masloboino Zhirovoe Delo* 15, No. 6, 18-21; through *Chem.-Abs.*

Metal-cleaning Detergent

An alkaline composition for inhibiting corrosion and cleaning zinc, iron and tin ware at temperatures varying from cold to boiling consists of about 85 per cent of water-soluble inorganic alkaline detergent such as soda ash and trisodium phosphate, 5-6 per cent of a solid hypo-

chlorite, and 9-10 per cent of a water-soluble zinc salt. The Griffith Laboratories Ltd. Canadian Patent No. 388,512.

Highly Transparent Soap

To produce a transparent soap with maximum transparency, oils which promote this property are needed as well as additives such as sugar or glycerine. Transparency is also promoted by maximum saponification and by certain mechanical aids during the soap manufacture. Compositions suggested are:

I	
	Parts
Stearin	40
Coconut oil	50
Rosin	5
Castor oil	5
Caustic soda, 37° Be.	50
Sugar	20
Water	10
Alcohol	40
Glycerine	10

II	
	Parts
Stearin	45
Coconut oil	55
Castor oil	5
Sugar solution, sugar 1, water 1/2	30
Caustic soda, 37° Be.	50
Alcohol	35

This soap is highly transparent, gives a good lather and is inexpensive to make. It has a fatty-acid content of 60-70 per cent. A. N. Ghose. *Indian Soap J.* 6, 256-8 (1940).

Pre-shave Lotion

A pre-shave lotion to be applied to the face before shaving with an electric razor should have an astringent action. The main constituent is ethyl alcohol, the strength used being 45-60 per cent. Up to 0.5 per cent of aluminum chloride in addition gives increased astringency. "Hawthorn" is a popular type of perfume for this purpose. Coloring matter may also be added. *Perfumery & Essential Oil Record* 31, 155 (1940).

Paste Cleaner

A paste cleaning composition is prepared by heating a large quantity of water and dissolving in it soap

flakes, trisodium phosphate, soda ash, and sodium metasilicate, in sequence. The mass is poured into containers and allowed to cool. C. I. Austin. Canadian Patent No. 388,157.

Buffered Detergent

An alkaline detergent composition giving a solution of substantially constant pH contains trisodium phosphate or soda ash buffered with a mixture of disodium phosphate and borax in the ratio of about 1:1. The product is suitable for cleaning various materials. Souren Z. Avedikian. U. S. Patent No. 2,187,536.

Phosphate Cleaning Agent

Aluminum phosphate in the form of mineral substance is treated with alkali and freed if necessary, from a part of the resulting alkali phosphate. The material may be employed in paste or solid form. Hans Heinrich Hütte G.m.b.H. German Patent No. 681,370; through *Chem. Abs.*

Phenol Recovery

Phenol can be recovered from waste liquors of various kinds by extraction with ethyl acetate. From a 2 per cent aqueous solution of phenol containing some common salt, extraction with 10 per cent of benzene removes 25-30 per cent of the phenols, with chlorobenzene about 50 per cent, and with ethyl acetate about 94 per cent. *The Chem. Trade J. & Chem. Engineer* 106, 321 (1940).

Lavender Perfume

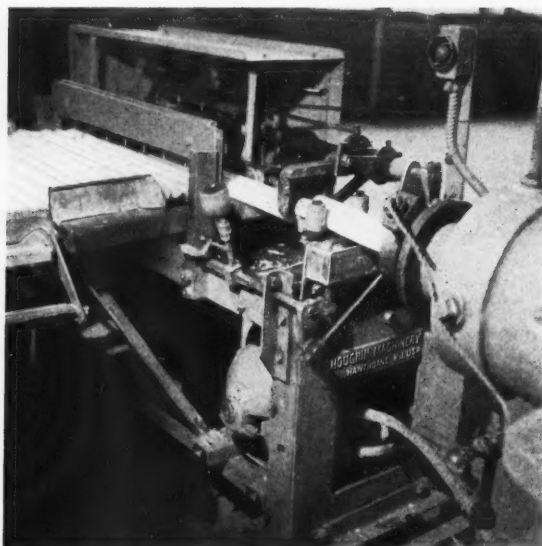
A fresh stable lavender odor can be secured with the following perfume formulas:

I.	
Lavender oil	400 g.
Spike oil	150
Oil of rosemary	85
Benzoin infusion	100
Artificial musk	20

II.	
Lavender oil	150 g.
Spike oil	50
Geranium oil, African ...	125
Bergamot oil	150
Cumarin	25
Lemon oil	50
Musk solution	20

The second formula is particularly recommended for shaving soap. Both formulas are for 50-75 kg. of soap. *Seifensieder-Ztg.* 67, 154 (1940).

Announcing the Houchin Automatic Cutting Table



This illustration shows a Houchin Automatic Cutting Table in one of America's largest toilet soap plants.

After exhaustive tests under actual working conditions and continuous service in commercial production, this Automatic Cutting Table is now offered to speed up production and reduce the cost of operation.

Soap is extruded from the plodder at right angles to the cutting table. First a length is cut from the extruded bar and the bar is cut again into cakes.

The action is entirely automatic, reducing handling and increasing speed of production. This table cuts soap as fast as the plodder extrudes it.

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No. 2,194,924, Insecticide, Patented March 26, 1940 by Gerald H. Coleman and John W. Zemba, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich. A substantially water-free insecticidal spray comprising a solution of a toxicant selected from the group consisting of the beta-hydroxy-ethyl ethers of 2,4-diethyl phenol and 4-secondary-butyl phenol in a non-corrosive organic solvent.

No. 2,199,712, Method of Cleaning and Preparing Metal for Paint, Patented May 7, 1940 by Howard R. Neilson, Detroit. A metal cleaning composition including principally water and a metal etching acid and comparatively small quantities of a sodium secondary alcohol sulfate and acetone.

No. 2,200,564, Insecticide, Patented May 14, 1940 by Milton S. Schechter and Herbert L. J. Haller, Washington, D. C., assignors to Secretary of Agriculture of the United States of America. An insecticide containing as its essential active ingredient phthalonitrile.

No. 2,200,582, Insecticide, Patented May 14, 1940 by Elbert M. Shelton, New Haven, Conn., assignor to Tannin Corp., New York. As a new composition of matter, an insecticide comprising the reaction product of nicotine, a vegetable tannin of the catechol class and an aldehyde.

No. 2,201,098, Preparation for Cleaning Removable Dentures, patented May 14, 1940 by Orville E.

McKim, Port Chester, N. Y. A liquid preparation for cleaning removable dentures comprising a combination having an acid reaction of ingredients for penetrating and dissolving mucin plaque accumulations on the dentures, consisting of substantially one part of a saturated aqueous solution of citric acid and fifteen parts of isopropyl alcohol, the combination being in an aqueous solution.

No. 2,201,103, Insecticide and Fungicide, Patented May 14, 1940 by Frederick E. Dearborn, Washington, D. C.; dedicated to the free use of the people of the United States. An insecticide containing as its essential ingredients compounds of the general formula $3\text{CuAsO} \cdot \text{CuORSx}$, where RSx is the anhydride of a sulfurized unsaturated monocarboxylic acid containing from two to four atoms of sulfur in the acid molecule.

No. 2,202,103, Method and Means for Stabilizing Soaps, Patented May 28, 1940 by Lauren B. Hitchcock and Robert E. Divine, Niagara Falls, N. Y., assignors to Hooker Electrochemical Co., New York. The process for production of soap relatively free from metals tending to promote deterioration of soap which comprises saponifying a suitable fatty material by means of an aqueous solution of caustic soda, containing sensible quantities of such metals, in presence of a commensurate quantity of a sulfur compound which forms with the metals compounds that are relatively innocuous with respect to soap as well as relatively insoluble and tend to settle in fluid soap, allowing the products to settle and separate and removing the relatively metal-free upper or "neat soap" layer.

No. 2,202,145, Oil Synergist for Insecticides, Patented May 28, 1940 by Craig Eagleson, Fruitdale, Tex., dedicated to the free use of the people of the United States. An insecticide containing as its essential active ingredient a material selected from the group of plant extractives consisting of pyrethrins and rotenone, with sesame oil added.

No. 2,202,148, Insecticide and Larvicide, Patented May 28, 1940 by Joseph M. Ginsburg, New Brunswick, N. J., assignor to Endowment Foundation, New Brunswick, N. J. An insecticide and mosquito larvicide including an oil derived from petroleum, an extract of pyrethrum, and a compound in small amount taken from the class of thio-diaryl-amines, but having syner-

gistic action with the extract of pyrethrum, water and an emulsifier.

No. 2,202,169, Method of Protecting Goods Containing Proteins against Insects, Patented May 28, 1940 by Paul Schlack, Berlin-Treptow, Germany, assignor to I. G. Farbenindustrie Aktiengesellschaft, Frankfurt-on-the-Main, Germany. The method of permanently protecting goods containing proteins against insects, which comprises treating the goods at a temperature above 40°C . with a compound selected from the group consisting of alkylene oxides, alkylene imines, and alkylene sulfides until the amino groups of the protein material are substantially alkylized.

No. 2,202,741, Detergent, Patented May 28, 1940 by Robert W. Maxwell, Wilmington, assignor to E. I. du Pont de Nemours & Company, Wilmington. A solid detergent in bar form, the solid components of which consist of sodium dodecylsulfate, sodium sulfate, and, as a binder, sodium starchglycolate.

Changes on Hydrogenation

Changes in refractive index, viscosity, density and solidification temperature of the fatty acids with the degree of hydrogenation of cottonseed oil and of sunflower-seed oil were followed. Hydrogenation increased the viscosity but decreased the density and refractive index. For a series of oils the iodine number showed a linear relation to the refractive index. For cottonseed oil the relation is expressed by n_D^{40} equals 1.4551 plus 0.00012 times the iodine number, and for sunflower-seed oil by n_D^{40} equals 1.4491 plus 0.00016 times the iodine number. The relation between the viscosity and iodine number for these oils is practically linear. G. B. Ravich. *J. Tech. Phys. (U.S.S.R.)* 7, 2249-54; through Chem. Abs.

Capillary-active Substances

Alkylidenemalononic acids or their esters are sulfonated at the double bond. If the free acid is treated, it is esterified subsequently. The reactants are so selected that the resulting compound contains at least 8 carbon atoms. The products have detergent properties. I. G. Farbenindustrie A.-G. German Patent No. 684,431; through Chem. Abs.

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New Equipment

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

712—Liquid Soap Dispenser

Bobrick Manufacturing Co., New York, has just put on the market a new leakproof liquid soap dispenser which incorporates many advantageous features. Its push-in valve contains no washers and is equipped with an unbreakable spring. Strongly built with a modern plastic body and opal glass jar, the No. 21 dispenser has theft-proof concealed wall fastenings and a lock top which opens with a special key. This model fills from the top. It is available with either a glass or a metal globe which can be removed for cleaning.

713—Electron-Ray pH Meter

Cambridge Instrument Co., New York, has recently introduced the Cambridge "Electron-Ray" pH meter which is sensitive to .005 pH, it is said. It reproduces readings to .01 pH and incorporates an electron-ray tube in place of the conventional null point. Scaled in both pH units and millivolts it can be used without applying a conversion factor. This portable meter operates directly from a 110-125 volt supply line. Another new control device is the Cambridge "Thermionic" pH Recorder for continuous pH control. The weatherproof housing of the electrode permits installation at the desired sampling point. The continuous-flow chamber is constructed so that no clogging will take place.

714—Processing Kettles

Drever Co., Philadelphia, has put on the market a new line of automatic processing kettles for use in processing wax compounds, fatty acid products and similar products. The

kettles are made in sizes of 200, 500, and 750 gallons capacity, can be heated by fuel oil, electricity or gas. They are equipped for automatic control of temperature, pressure, atmosphere, agitation, time, and fumes.

715—Floor Maintenance Brush

Lincoln-Schlueter Floor Machinery Co., Chicago, is now marketing a new type of floor maintenance brush, the "Lincoln Scrubrite Brush," which is said to possess exceptional wearing qualities. The processed animal hair of which the brush is made is molded into a bristling, sponge-like mass of unusual construction. The brushes are furnished in sizes to fit standard makes of machines.

716—Insecticide Diffuser Data

The engineering department of Fumeral Co., Racine, Wis., has just prepared a bulletin explaining the steam operation and steam consumption of "Fumeral" pressure diffusers operated at various pressures from 30 to 200 pounds. Boiler capacities and volume of steam produced per minute are also covered in the bulletin.

717—Floor Wax Slip Resistance

Franklin Research Co., Philadelphia, has brought out a four-page folder discussing slip resistance of floor wax, methods of testing and results of tests. Another folder describes the Franklin line of floor maintenance materials.

718—Soapless Detergent

Michel Export Co., New York, is distributing copies of a pamphlet describing "Alframine DCA," a soapless detergent, its properties and uses. The material is a sulfonation product of a high molecular condensate of the aliphatic series.

719—Fibre Container Sealing

A 36-page booklet just issued by Robert Gair Co., New York, covers

the subject, "Sealing of Corrugated and Solid Fibre Containers." Hints are given regarding correct methods of hand and automatic sealing with adhesives and gummed paper tape to avoid waste. Sealing with metal stitches and staples and reinforcing of containers with metal straps and wire are covered in detail.

720—Household Pests

"How to Identify Some of the Usual and Unusual Household Pests in New York" is the title of booklet recently issued by Sanders-Durling Entomological Service, New York, in which drawings and descriptions of many pests are presented together with their disease-carrying characteristics and methods of control.

Describes Beeswax

Beeswax is described in respect to its physical and chemical properties in a new technical bulletin (No. 716) of the United States Department of Agriculture, based on examination of sixty samples. The bulletin may be purchased from the Superintendent of Documents, Government Printing Office, Washington, at five cents a copy.

Arthur P. Bopf Dies

Arthur P. Bopf, president and founder of the Bopf-Whittam Corp., wool fat products, Linden, N. J., died recently in his home in Elizabeth, N. J., at the age of 64. After an early career with one of the Standard Oil subsidiaries, Mr. Bopf founded his own firm in 1914. At that time as a result of war conditions, imports of lanolin to the United States had ceased. With his own process for the refining of lanolin, Mr. Bopf became the first producer in the United States. In 1925, the corporation moved to a larger plant in Westfield, N. J., and in 1937, Mr. Bopf erected what is said to be the largest lanolin manufacturing unit in this country, in Linden, where the company is now located. According to B. C. Bopf, the present personnel of the company will continue its operations.

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Soap Stock Analysis

In a porcelain dish 3-4 grams of soap stock are treated dropwise with 1:4 sulfuric acid or 1:1 hydrochloric acid in the presence of methyl orange until the reaction is faintly acid. The mass is then well stirred and anhydrous sodium sulfate added at 60-70°C. The powdery mass so formed is then extracted with ether or petroleum ether and the oil titrated in the usual manner. M. Z. Klyachko. *Masloboino Zhirovoe Delo* 13, No. 5, 21; through Chem. Abs.

Soap Micelles

In further developing ideas as to the structure of soap micelles it is postulated that the micelles are built up of sheets of orientated soap molecules with —COONa groups forming one surface of the sheet and the terminal $\text{CH}_3\text{—}$ groups of the parallel alkyl groups forming the other surface. In the micelles the sheets are so arranged that pairs of —COONa surfaces face each other as do also pairs of $\text{CH}_3\text{—}$ surfaces. On increasing the carbon chain length of the soap from C_4 to C_{10} , the amount of water held between the —COONa surfaces of the adjacent sheets increases from 1 to 6 molecules per molecule of soap. When clear dispersions of benzene are produced by addition of limited amounts to a soap solution containing micelles, changes in the x-ray diagram showed that the benzene is taken up between the $\text{CH}_3\text{—}$ surfaces of the sheets of soap molecules. Kurt Hess. *Fette und Seifen* 46, 572-5; through Chem. Abs.

Esters in Glycerine

The source of formation of esters in glycerine is the presence of nonvolatile organic residues in the saponification mixture. The method of adding an excess of lime slurry to raw glycerine or the saponification mixture reduces but little the content of esters. The best results were obtained with the addition of 2-3 per cent of iron filings at 80°C. and a slight excess of lime slurry at 95-100°C. The filtered solution is freed from excess lime water by passing

carbon dioxide or air through and filtering. The method is based on the saponification of esters and the greater adsorptive power of ferric hydroxide formed in the reaction. V. Loginov and G. Kuznetsova. *Masloboino Zhirovoe Delo* 15, No. 5, 15-17; through Chem. Abs.

Soap Improvement

The soaps formed from the oxidation products of high-molecular nonaromatic hydrocarbons are heated under pressure with an equal weight of steam. The pressure is then released in stages. I. G. Farbenindustrie A.-G. German Patent No. 684,968.

Castor Oil Extraction

The advantages of extracting castor seed with alcohol instead of expressing the seed in a hydraulic press are that completely decorticated seed can be used and all of the oil obtained as No. 1 oil. The yield is 4 per cent greater and the nitrogen content of the cake 25 per cent higher. The cost of manufacture is also less. N. G. Chatterjee. *Ind. & News Ed., J. Indian Chem., Soc.* 2, 171-7.

Increased Use of Tall Oil

Tall oil, derived from the waste liquors of the paper and pulp industry, continues to find increased use in the soap industry. Crude tall oil is cheaper than any other organic acid available. Its fatty acids contain considerable linoleic acid, the rosin acids contain some abietic acid, and the nonacids some phytosterols. Most of the substances present have not yet been identified. Results of typical analyses of American and Swedish commercial tall oils are given below:

Tall oil soap is very soluble, even in cold water. Many rag-washing plants and commercial laundries

Mothproofing Detergent

A mothproofing detergent composition is formed essentially of an acid soapy washing agent and triphenyldichlorobenzylphosphonium chloride, at most only slightly colored in the dry state, soluble in water, and suitable for treating wool, feathers, hair, etc. for simultaneous cleaning and mothproofing. Hermann Stötter and Theodor Hermann. U. S. Patent No. 2,184,951; through Chem. Abs.

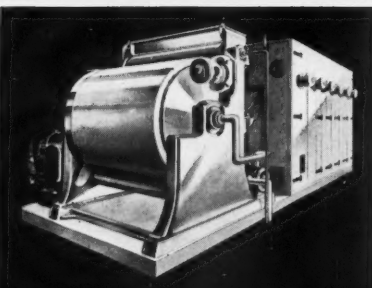
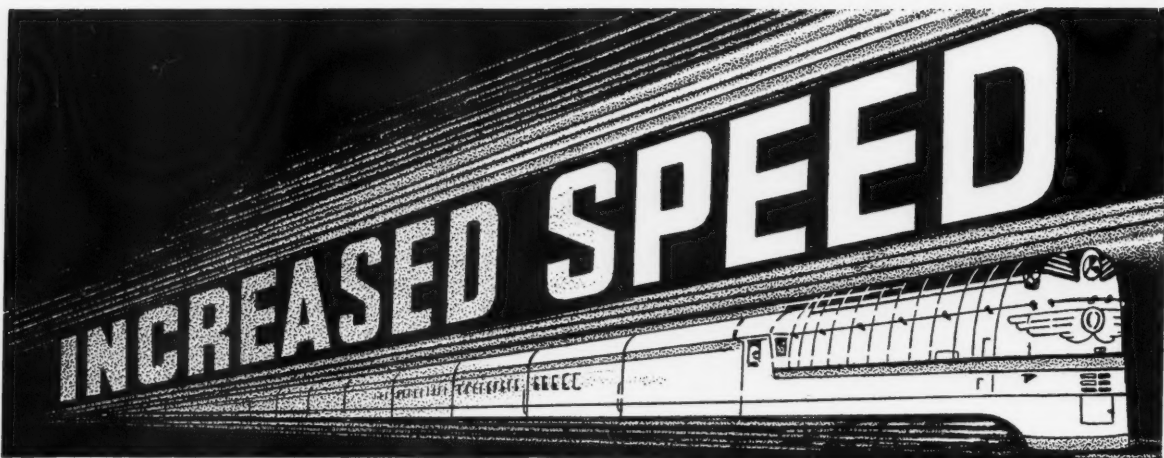
New Seed Fat

Extraction of the seeds of *Quisqualis indica* L. with petroleum ether produced 23.9 per cent of an oil whose fatty acids consisted of myristic 4.5 per cent, palmitic 29.2, stearic 9.1, oleic 48.2 and linoleic acid 9.0 per cent. Progressive hydrogenation of the oil using nickel formate at 240° C. caused the iodine number to decrease to the level of the thiocyanogen number before any decrease in the latter was observed. Unsaponifiables consisted of sterols and colored substances. H. P. Kaufman and Bao-Wei King. *Fette und Seifen* 46, 387-8; through Chem. Abs.

have found the use of tall oil soap effective and inexpensive. Large tonnages have been consumed in scouring silks and rayons. Dry-cleaning soaps, textile specialties, metal-cleaning compounds, garage floor cleaners, and many other cleansers are being marketed made with tall oil soap. Hard soaps containing up to 25 per cent of tall oil are being made. The soap becomes too soft with larger amounts.

Tall oil sulfonates readily and is in fact more reactive than other oils. Sulfonated tall oil serves as a substitute for Turkey red oil. Arthur Pollak. *Oil & Soap* 17, 87-9 (1940).

Source	Grade	Acid No.	Saponification No.	Rosin Acids	Fatty Acids	Nonacids Sterols, etc.
American	crude	150-160	160-170	40-45%	45-55%	6-10%
American	refined	170-180	170-185	34-38	55-60	6-10
Swedish	crude	163	170	44	9
Swedish	distilled	186-189	12	82-83	5



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Glycerine Outlook

(From Page 33)

willingness of producers to see glycerine quotations get out of hand.) Too often in the past they have seen high glycerine prices followed by increased use of glycerine substitutes, with an aftermath of lowered glycerine consumption. In the current market situation they seem definitely to be more interested in seeing stable prices and steady consumption, rather than a runaway market, followed by all the unpleasant aspects of a hang-over. Glycerine users thus seem to be fairly safe in expectancy of normal supplies and relatively stable market quotations,—for the immediate future at least.

Glycerine exports from the United States were higher during 1939 than in any year since 1919. For the first half of 1940, exports were also higher than usual. The bulk of these glycerine exports went to Canada, South America, and the Scandinavian countries, while only comparatively small quantities went directly to the large European nations. European buyers have apparently shown little interest in American glycerine up to now. There is no reason to believe that the effect of exports will have any important influence on the domestic market, unless foreign buyers suddenly display a more substantial interest in the American market than has been the case in trading over the past twelve months. Nor should the U. S. armament program produce any startling change in the glycerine market. As was pointed out before, glycerine is used in a tremendous variety of every-day peace-time products which are not subject to sudden changes in consumer demand.

Manufacturers of tobacco, cellophane, alkyd resins, chewing gum, candy and so on, have built up such a strong peace-time demand for glycerine that these uses have overshadowed the declining application of glycerine as a war necessity. Even if the demand for glycerine as a war material were as great as it was back in 1914, this demand would have a proportionately lessened effect on

the U. S. Glycerine market in view of the fact that production in the United States is four or five times as large as it was at the beginning of the first World War.

New Emulsifier

A new emulsifying agent may be of importance in many industries, as it is inorganic and chemically inert. The product is marketed under the trade name of "Unemal" and is a smoothly gelatinous form of hydrated aluminum oxide. As a result of rapid "ageing" during manufacture, it is rendered insoluble in acids and alkalis, and shows no reactivity toward electrolytes, inorganic solids, pigments, etc. The product forms oil-in-water emulsions with almost all liquid materials immiscible with water. Emulsions made with this agent are stable, do not separate oil over long periods of time and may be subjected to wide temperature variations. The emulsifying agent is dispersed in the water phase, and the oil phase added with agitation. From 2 to 5 per cent of agent is used, based on the total amount of emulsion. R. K. Thomas. *Chem. Age* **42**, 215 (1940).

Oleic Acid Determination

By properly selecting the conditions of treating with alkaline potassium permanganate solution, the oleic acid in fatty acid mixtures can be converted quantitatively into dihydroxystearic acid. The oleic acid content of linseed oil fatty acids was determined by neutralizing a 15-gram sample of the fatty acids with alcoholic potassium hydroxide, diluting with two liters of water cooling to 0° C. and adding two liters of potassium permanganate solution with agitation during 30 minutes. The dihydroxystearic acid was isolated. H. P. Kaufmann and H. Fiedler. *Fette und Seifen* **46**, 569-72; through *Chem. Abs.*

Glycerine Substitute

Alkali lactate solutions are mixed with urea to give a substitute for glycerine. Horst Schleissing. German Patent No. 684,233; through *Chem. Abs.*

Cleaning Tin Plate

It was reported some time ago that in the use of mild alkalis for the cleaning of tin-coated equipment, the addition of 10-20 per cent of sodium sulfite to the solid detergent would reduce the chemical action of the alkali on the tin to a minimum. Further study of sulfite-containing alkaline cleaners for removing paper labels, lacquers, gums and printing inks from used tinplate containers showed that when tinplate was in contact with iron or certain other metals, etching occurred on the surface of the tin. The cause is electrochemical action. In the industrial cleaning of used tinplate it is therefore necessary to insulate the tin articles from other metals in order to preserve the bright surface of the tin. *Chem. Trade J. & Chem. Eng.* **106**, 274 (1940).

Oil Compositions

Elaidinization of some non-drying oils such as almond oil and olive oil proved that their minor component linoleic acid, like their minor component saturated acids, is very largely present in the form of dioleoglycerides, e.g. linoleodiolein, but the procedure used is not suited to the direct quantitative estimation of the component glycerides in such fats. The temperature required causes destruction of linoleic groups to an undesirable degree. In peanut oil in which oleic acid forms 60 per cent or less of the total acids, considerable proportions of monosaturated-mono-linoleo-monooleins may be present. B. G. Gunde and T. P. Hilditch. *J. Soc. Chem. Ind.* **59**, 47-53 (1940).

Complex Detergent

A detergent consists essentially of a mixture of mono-sulfonated alkylated benzene hydrocarbons obtained by one-third chlorinating on a molar basis a kerosene fraction with a distilling range of 182-280° C. An aromatic hydrocarbon of the benzene series is condensed with the chlorinated kerosene hydrocarbon mixture. Monsanto Chemical Co. Canadian Patent No. 388,554.

The Restaurant Market

(From Page 27)

signs of insects or rodents are seen. Breeding is so rapid that we do not wait for the regular weekly visit in such instances."

Restaurants in general are given service by exterminators and fumigators from three times a week to three times a month. To augment the service rendered by the fumigators many restaurants use insecticides in hand and electric sprayers to keep down the roaches and water-bugs which seem to be ever present where food is stored or refuse is allowed to accumulate.

"I'm willing to bet a hundred dollars," said the steward of a large restaurant, "that you can't find one roach or bug in my entire kitchen. When we first moved to this location, the place was so infested with insects that the exterminator told me I'd never get rid of them, but I did and I'll show you how." With these words he picked up an electric hand sprayer, poured in some liquid insecticide and then filled it up with "high test naphtha." (Shades of the fire laws!) This insecticide, he said, penetrated every crack and cranny where the roaches might be hiding.

"Very effective," agreed the Soap representative, "but do you put out all your pilot lights in the kitchen while you are spraying?" The steward said he'd never thought of that! The same steward also demonstrated another of his home-made methods for fighting bugs. Pointing out an iron cover in the floor, which covered the garbage disposal dump, he sprayed a fine stream of naphtha all around the edges of the cover. Then throwing open the iron cover, he threw a lighted match into the hole. The naphtha, bursting into flame, formed a bridge of fire all around the rim of the hole. The bugs, trying to run out, were burned to a crisp! (Mr. Insecticide Manufacturer, try this one on your piccolo some day!)

Whereas buying in independent restaurants is usually done by the manager or the steward of the unit, in restaurants, lunch stands and automats operated in chains, the buy-

ing is naturally done by a central purchasing agent. The tendency in chain restaurants where buying is done in large quantities is towards using a smaller variety of products, that is, using only a few compounds for performing all the different cleaning jobs which must be done.

The purchasing agent for a country-wide chain of modern lunch rooms said: "In our various units, we use no soaps, no trisodium phosphates, no caustics. For every one of our cleaning operations we use only one product. This product has been developed in the laboratory of our company after years of experimentation and is made according to our secret formula by the manufacturer who supplies all our stores. (They ought to set this one to music also.—Ed.) An average of 250 pounds of this special compound is used by each unit every month, although, of course more or less than this is used depending on the business volume of the unit. Mechanical dish washers are used in all our branches for washing dishes and glasses and for sterilizing. No disinfectants are used in our restaurants,—we don't need them. Disinfectants are for those who don't keep their places clean. (More music, please.—Ed.) They are unnecessary if an eating place is kept as immaculate as are our restaurants through frequent use of our specially formulated all-purpose cleaning compound."

This P. A. seemed to be perfectly happy with his "secret" all-purpose product that washes the dishes, cleans the floor, sterilizes glasses and polishes brass. Maybe eventually he will train it to fire the furnace. But most of them still use T.S.P. at around ten cents per pound.

Ximenia Oil

Ximenia oil is a vegetable fat with fatty acids of unusually high molecular weight. West African lumenue nuts yielded an oil which was saponified to obtain a fatty acid mixture having the constants: melting point 40-42° C., saponification number 180.5, acid number 179.0, iodine number 88.0, thiocyanogen number

69.4, and saturated acids 6 per cent. The composition is tentatively reported as 4 per cent stearic acid, 54 oleic, 10 linoleic, 2 cerotic, 25 ximenic and 5 per cent lumenue acid. H. A. Boekennoogen. *Fette und Seifen* 46, 717-19; through *Chem. Abs.*

Soap Plant Costs

(From Page 31)

ders is soap made from fatty acids distilled from garbage grease.

Generally speaking, however, fatty acids are to be regarded as desirable auxiliary materials, rather than complete substitutes for neutral oils and fats. When using fatty acids, it is possible to save up to one-third of the steam power normally required, as the period of saponification is considerably curtailed. In addition, there is about the same degree of saving on alkali cost. But as against these factors, there is the frequently increased cost of the fat charge to be taken into account, as well as the total loss (from the soapmaker's point of view) of the available glycerine.

An exception to the rule must, however, be made for the Twitchell process. Despite the conventional assertions by various writers of textbooks, to the effect that Twitchellized fatty acids give soaps of inferior color, I have personally seen many tons of good quality toilet soap made from such material—using one of the modern, improved reagents, excluding air during the reaction, and subsequently bleaching in the kettle, when necessary, with hypochlorite. Where factors such as the prices of soda ash, caustic soda and glycerine are variable, it is of course impossible to state whether or not the installation of a Twitchell plant would prove to be a worth-while proposition from the point of view of the profit-and-loss account. There is, however, no doubt that the idea of installing an inexpensive, easily constructed Twitchell plant is nowadays gaining ground. From personal experience and observation, I believe that the extra glycerine recovered and the saving on alkali more than counterbalance the moderate outlay on plant.

(To be concluded)

Sanitary Products SECTION

A Section of "SOAP" dealing with

Insecticides • Disinfectants • Moth Products
Floor Products • Polishes • Chemical Specialties



PYRIN is manufactured under the most modern conditions in our enlarged Brooklyn Plant where we have convenient and unlimited capacity for storage and easy access to truck, rail or sea transportation to any part of the world, assuring you of prompt delivery of the finest insect spray concentrate known to science. Join the swing to PYRIN—and save money.

FOUR
BLDGs.
HERE

CHILD AERIAL SURVEYS, INC. N.Y.C.

JOHN POWELL & COMPANY, Inc.
114 E. 32nd Street, New York, N. Y.

THIS MAN WANTS KNOCKDOWN.

He says, "I want to see the flies fall. That's the way I judge a cattle spray."



THIS MAN WANTS KILL.

"I haven't time to watch 'em fall, but when I come back to the barn I want to see 'em lying on the floor."



**TO SELL MORE CATTLE SPRAY
—SELL THESE FOUR FARMERS**



HE WANTS REPELLENCY. "I can't bother to hunt dead flies. I want to see my cows grazing contentedly. That tells me the spray's working right."



AND THIS ONE wants all-round effectiveness. "For my money, a cattle spray's got to give me everything—knockdown, kill, repellency, all in one."

LET YARMOR HELP YOU SELL MORE CATTLE SPRAYS

These four men speak for *all farmers*. They want results. And your cattle sprays—properly formulated with *enough* Yarmor* 302 pine oil—will meet their demands—will build and *hold* sales . . . How much Yarmor

is "enough"? Let us tell you the amount you will need for real results, based on our extensive laboratory and field experience.

Write us today for the facts.

90-41

*Reg. U. S. Pat. Off. by Hercules Powder Company

**Naval Stores Department
HERCULES POWDER COMPANY <**

1001 Market Street, Wilmington, Delaware

BRANCH OFFICES: CHICAGO NEW YORK ST. LOUIS SALT LAKE CITY SAN FRANCISCO



KLENZ-AIRE DEODORANT OILS

BOUQUET	KLENZ-AIRE DEODORANT OIL
LAVENDER	KLENZ-AIRE DEODORANT OIL
LILAC	KLENZ-AIRE DEODORANT OIL
MINT	KLENZ-AIRE DEODORANT OIL
PINE NEEDLE	KLENZ-AIRE DEODORANT OIL
ROSE	KLENZ-AIRE DEODORANT OIL

FORMULA FOR USE:

3 OUNCES KLENZ-AIRE DEODORANT OIL (any odor)
3 OUNCES FORMALDEHYDE U. S. P. 40%
Q. S. WATER TO MAKE ONE GALLON

THE ABOVE MAKES A FINISHED DE-
ODORANT SPRAY IN MILKY EMUL-
SION FORM WHICH MAY BE
COLORED ANY DESIRED
SHADE TO MAKE IT
MORE ATTRAC-
TIVE.

*Order
Trial
Pound*

CITROGEN

This is a product of unusual odor value. It is not intended to reproduce the odor of Citronella. It possesses a distinct and powerful character, refreshing in type. Citrogen is more stable in soap than Citronella, and represents a greater dollar-for-dollar odor value over oils such as Citronella, Camphor Sassafrassy, etc.

CITROGEN No. 22

This product is a substitute for either Citronella Ceylon or Java. It can be particularly recommended for cheap laundry soaps whereby the use of 1% or 1 pound to 100 pounds gives a very pleasant and refreshing odor. Being lower in price than the Citronella Oils, our Citrogen No. 22 should be of considerable interest.

CAMFOL

A product to replace Camphor Sassafrassy. It is of particular interest at this time because of the high price and scarcity of the original product.

We are certain that experiments made with Camfol in comparison with Camphor Sassafrassy will prove decisively that Camfol will replace it in most cases and at a saving in cost.

SAVONEX

A new low priced odorant, possessing the following qualifications:

1. Water White.
2. Twice the odor value of such products as Camphor Sassafrassy or Sassafras Artificial.
3. One-half the present price of Sassafras Artificial.
4. Maintains its odor in soap longer and more pleasantly.
5. It can be purchased on a large scale here in America and your supply is guaranteed.

NEW PRICE
LIST SENT
ON REQUEST

O I L B E R G A M O T S Y N T H E T I C S U P E R F I N E
YOU NEED IT — YOU CAN USE IT!

Remarkable reproduction of the natural oil. Successfully used in many places such as colognes or certain

perfumes, or employed in varying proportions mixed with the natural for the finer products.

AROMATIC PRODUCTS, INC.

15 E. 30th Street, New York FACTORY: Springdale, Conn.
ATLANTA — CHICAGO — PITTSBURGH — DALLAS — MEMPHIS



TRAIL

Trail blazing in industry demands years of experimentation before a new product is put on the market. Research at McLaughlin Gormley King Company is continuous and has led to the development of Pyrocide 20, the first standardized pyrethrum concentrate and also to the improvements featured in the 1936 advertisement on the opposite page.

These improvements have been copied by the entire trade. Today Pyrocide 20 is the old reliable of the industry. Pyrocide 20 costs no more than other pyrethrum concentrates . . . why fuss around with products often less satisfactory?

During manufacture three analyses of Pyrocide 20 are made as a routine matter. The reputation of McLaughlin Gormley King, the house most experienced in producing standardized pyrethrum concentrates, stands behind every shipment. Pyrocide 20, Deodorized . . . Clarified, contains 2.5% pyrethrins by weight (Seil method) equivalent to 2.0 grams pyrethrins per 100 cc.

McLAUGHLIN GORMLEY KING COMPANY
MINNEAPOLIS, MINNESOTA

**THE PUREST FORM OF PYRETHRINS
COMMERCIALY AVAILABLE**

BLAZERS

We spent more than
2 YEARS IN TESTS
... before we announced the
new Improved Pyrocide 20




WHEN a company is first to introduce a new product, the natural question is "Has it been tested?" The answer on Improved Pyrocide 20 is emphatically "Yes!" For more than two years, MGK chemists tested and retested, checked and rechecked pyrethrum extracts with four aims in mind:

1. Reduction of odor.
2. A clear dilution with ANY base oil.
3. Elimination of stain.
4. The achievement of these three advantages at no increase in cost.

Today they offer you another great advance in pyrethrum extracts—tested, proved, improved Pyrocide 20. Improved Pyrocide 20 is practically odorless—cuts perfume costs $\frac{1}{2}$ to $\frac{2}{3}$. Improved Pyrocide 20 dilutes clear with ANY base oil. It does not stain. And it costs you not one cent more.

Again MGK have written a new chapter in the history of pyrethrum. Again they have demonstrated the value to you of their forward looking policy "First experiment, then test, then offer a thoroughly proven better product."

McLAUGHLIN GORMLEY KING COMPANY
MANUFACTURING CHEMISTS  MINNEAPOLIS, MINNESOTA

"When it's from McLaughlin, it's Tested"

December, 1936

Say you saw it in SOAP

PYROCIDE

20

July, 1940

Say you saw it in SOAP!

...for *Para Blocks*
and crystals—

DICHLOROMES NORDA

for Paradichlorobenzene

<i>Series A</i> \$1.00	<i>Series B</i> \$1.50	<i>Series C</i> \$2.00
Bouquet A	Bouquet B	Bouquet C
Lilac A	Lilac B	Lilac C
Rose A	Rose B	Rose C
Violet A	Violet B	Violet C
Sweet Pea A	Sweet Pea B	Sweet Pea C
Gardenia A	Gardenia B	Gardenia C



SECTOROMES NORDA

for fly sprays

Priced at 50c and \$1.00 per pound

Ask NORDA for further details.



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PYRETHRUM

PRINCIPLES

*Write to
Prentiss for prices*

- Purity -

PYRETHRUM Concentrate has a definite standard of purity to meet. Maximum kill demands maximum purity.

Thus the first selling point of any Extract is in its manufacture. Our process extracts much less waxes, gums, and resins of no killing power; our system of refinement completes the purification of the pyrethrins and presents them ready to use in our

Clarified
Pyrethrum Concentrate
Number 20

R. J. PRENTISS & CO., INC.

NEW YORK

CHICAGO

Derris

Pyrethrum

Cube

TAR ACIDS

*Cresol
Cresylic Acid*

TAR ACID OILS

CRESOL—U.S.P. with very close cut distillation range and light color, for pharmaceutical purposes—Meta-Para Cresol with high meta cresol content—Resin cresols close cut to wide boiling with guaranteed meta cresol contents and clean odor.

CRESYLIC ACID—Many distillation ranges appropriate for all established uses—pale color—clean odor—total impurities besides water not exceeding one half of one per cent.

TAR ACID OILS—Frozen crystal free at 0°C.—good emulsion-forming properties—low benzophenol content—appropriate for low to high coefficients with tar acid contents as required.

KOPPERS COMPANY, Pittsburgh, Pa.

PRODUCTS OF
THE WHITE TAR COMPANY
OF NEW JERSEY, INC.,
a Koppers subsidiary

REFINED NAPHTHALENE...

Crushed, Crystals, Powder, Lump, Chips, Flakes. For use in manufacture of deodorizing blocks, moth preventives and other insecticides. Also Naphthalene in Balls, Blocks, Tablets.

COAL TAR DISINFECTANTS...

Co-efficients 2 to 20 plus, F.D.A. Method.

CRESOL AND CRESYLIC DISINFECTANTS

PINE OIL DISINFECTANTS

PINE OIL DEODORANTS

CRYSTAL AND BLOCK DEODORANTS

LIQUID INSECTICIDES

DEODORIZING BLOCKS...

Pressed Naphthalene or Paradichlorobenzene. Various sizes and shapes. Perfumed and plain. Bulk industrial packages, retail packages.
Write to Kearny, N. J.

KOPPERS CHEMICALS AND SOLVENTS

Benzol (all grades)...Toluol (Industrial and Nitration)
...Xylol (100 and Industrial)...Solvent Naphtha (In-
cluding High Flash)...Phenol (82% and 90% Purity)
...Cresol (U. S. P., Resin and Plasticizer Grades)...
30 Meta Para Cresol...Cresylic Acid (Disinfectant
Grades—99%, pale, low-boiling. Insecticide Grades—
99%, pale, high-boiling)...Naphthalene...Shingle
Stain Oil...Refined Tars...Tar Acid Oils...Pitch Coke
...Industrial Coal Tar Pitches...Flotation Oils...Creosote

OTHER KOPPERS PRODUCTS

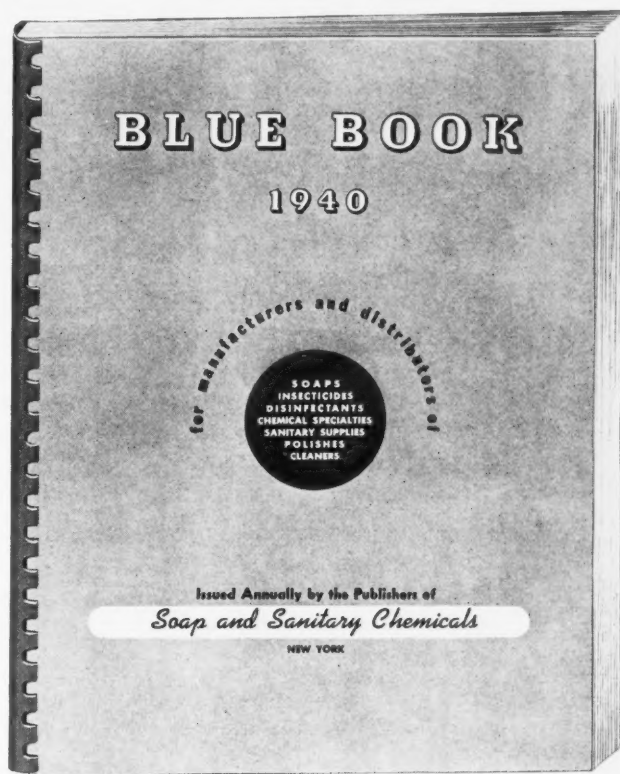
Benzol Recovery Plants...Naphthalene Removal Appa-
ratus...Sulphur Recovery Apparatus...Phenol Removal
Apparatus...By-Product Recovery Apparatus...Coal
Tar Roofing Materials...Waterproofing and Damp-
proofing Materials...Tarmac Road Tar Materials...
Bituminous Base Paints...Coal...Coke...Fast's Self-
aligning Couplings...Piston Rings...Pressure-treated
Lumber

KOPPERS

The 1940 BLUE BOOK

is an invaluable reference volume for every soap and sanitary chemical firm,—that will find service every day in the year. Keep your copy readily available for day-to-day use. Familiarize yourself with the wide variety of useful information it contains.

If you have not received a copy of the new BLUE BOOK ensure your getting one at once by entering a subscription to Soap and Sanitary Chemicals *now*. A check for \$3.00—the price of a yearly subscription—entitles you to a copy of the BLUE BOOK without extra charge.



Contents of the 1940 BLUE BOOK

Soap Perfuming—A review of perfuming principles, with detailed comments on suitability of some 150 essential oils, aromatic chemicals, resins, fixatives, etc. for use in white and colored soaps.

Labeling—A review of general labeling requirements for soaps and sanitary chemicals in the light of recent changes in federal laws. Sample labels for typical products.

Soap Builders—Notes on new and old filling and improving agents for use in soaps, their incorporation in finished products and the effects they produce.

Liquid Shampoos—A study of the various types of liquid shampoos on

the market, with comments on changing formulae.

Metal Polishes—A review of the various types of polishes, with typical formulae for chromium polish, brass polish, silver polish, liquid and powder type metal polishes and polish specifications.

Specifications—A review of U. S. specifications for soaps, polishes, waxes, cleaners, chemicals, etc. Specifications of the N.A.I.D.M. for insecticides and disinfectants.

Testing Section—Latest official methods of the National Assn. of Insecticide & Disinfectant Mfrs. and of the Association of Official Agri-

cultural Chemists for testing the efficacy of insecticides, insecticidal raw materials and disinfectants. Included in this testing section will be the Peet-Grady Test, the Seil Method, Gnadinger-Corl Method, F.D.A. Method, Mercury Reduction Method and Rotenone Determination Method.

Index to Soap—A complete composite index to the monthly issues of *Soap and Sanitary Chemicals* for the years 1934 through 1939, making it easy to locate valuable technical information and reference articles.

Association Officers—A list of officers and directors of important trade groups in the soap and sanitary chemical field.

Plus a complete 125-page Buyers Guide Section listing sources of supply for a complete line of raw materials, machinery and equipment bought by manufacturers of soaps and sanitary chemicals.

MAC NAIR-DORLAND COMPANY

254 WEST 31st STREET

NEW YORK, N. Y.

July, 1940

Say you saw it in SOAP!

83

CHECK YOUR POSITION

The sailor knows he's on the right course for he frequently takes his bearings. Now, with the insecticide season at its peak, it's an excellent time to check your position in the market. See how your product stacks up against competition. Insecticides must kill effectively *and* be pleasant to use to enjoy acceptance in today's homes. These two points are equally important. The first is up to you and the second is our business, deodorizing and perfuming your insecticide. Send us a gallon of your unperfumed insecticide. Let us do some checking and then we'll send you samples of your product already perfumed with real sales appeal.



VAN AMERINGEN-HAEBLER, INC.

315 FOURTH AVENUE, NEW YORK CITY

How "Multiple Management" Helps Produce Finer Pyrethrum and Derris Insecticides



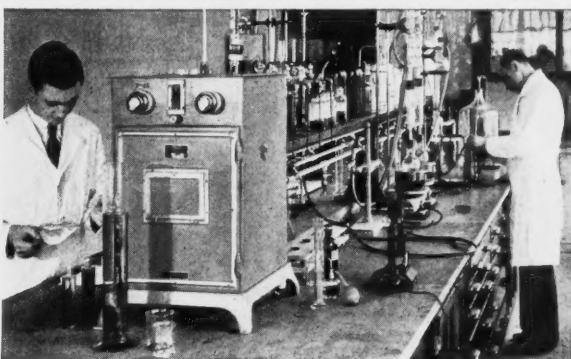
NO FEAR OF LAYOFFS haunts the great McCormick plant at Baltimore. Under an unique plan of "Multiple Management," McCormick employees share the problems and responsibilities of the business. In turn, they are rewarded in many ways for using brains and taking pains to make certain that McCormick insecticides and other products are the finest you can buy.



NEW WAYS OF DOING THINGS—making better products, giving better values, providing better service—are among the constant quests of the McCormick Factory Board, made up of alert, able factory men who are "on the way up." Junior and Sales Boards, elected from office and sales forces, also help supply the Company with ideas for keeping McCormick products and service "tops."



UNDER "MULTIPLE MANAGEMENT," by helping the Company increase efficiency all down the line, McCormick employees have helped work out their own job security. They work a 5-day, 40-hour week, are assured 48 weeks' work a year, get vacations and 8 holidays a year with pay, share in earnings of the business. Customers benefit by the smooth, frictionless flow of McCormick operation.



IT IS SCARCELY STRANGE that, with every employee on the alert and making suggestions, McCormick is quick to discover and adopt the latest manufacturing and laboratory methods and equipment. The McCormick insecticide laboratories, equipped for complete analytical and biological tests, are among the finest in the industry. Daily tests assure products of the utmost dependability and killing power.



NOWHERE IN THE WORLD will you find pyrethrum and derris powders which are ground finer than those which are air-floated from McCormick mills by the separator shown above. Because of their microscopic fineness, these powders provide more killing particles to the ounce, stick more closely to the vital parts of insects, insure a quicker, surer kill. McCormick workers guard this high quality carefully. "Multiple Management" teaches them that good products win steady customers—and steady customers make steady jobs.



For Further Information about McCormick Pyrethrum Powder, Derris Powder, or other products listed above, write to: The McCormick Sales Co., Baltimore, Md. In Canada: McCormick & Co. (Canada), Ltd., 454 King St., West, Toronto, Ont.



DEATH NEVER TAKES A HOLIDAY When Flies Are Sprayed With **PYREFUME**

Nature and science combine in PYREFUME, "The Perfected Pyrethrum Concentrate", to yield an insecticide deadly to flies, yet absolutely harmless to man. We do not aim for a mere 20 to 1 extract. We give you standardized potency—if more than 20 lbs. of flowers are needed to produce a gallon of PYREFUME, we use more. This is our guarantee:—EVERY 100 cc. OF PYREFUME 20 CONTAIN NOT LESS THAN 2 GRAMS OF PYRETHRINS.

CONSIDER THESE OTHER ADVANTAGES OF PYREFUME—THE SCIENCE-BUILT PYRETHRUM EXTRACT

- | | |
|------------------------------------------------------------------|-------------------------------------------------------------------|
| (1) A high "knock-down and kill" potency tested physiologically. | (4) Blends clearly with usual oil bases and stays clear. |
| (2) Pyrethrins content rigidly assayed after extraction. | (5) Unusually stainless. |
| (3) Assured stability through special Penick process. | (6) Singularly free from unpleasant odors; less perfume required. |
| (7) Costs less due to Penick economies. | |

PYREFUME is TOUGH! . . . Time and again PYREFUME has proved its effectiveness not alone against houseflies but . . . ROACHES, BEDBUGS, ANTS, FABRIC MOTHS, SILVERFISH

S. B. PENICK & COMPANY

132 NASSAU ST., NEW YORK, N. Y.

1228 W. KINZIE ST., CHICAGO, ILL.

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

DO
YOU
MAKE..

GLASS CLEANERS..... ☐

LIQUID SOAPS..... ☐

LIQUID POLISHES..... ☐

WAX POLISHES..... ☐

EMULSIFIED POLISHES..... ☐

DEODORANT BLOCKS..... ☐

FLY SPRAYS..... ☐

THEATER SPRAYS..... ☐

Come to headquarters for odors, deodorants and perfumes for these products—Givaudan-Delawanna, Inc. There is a Givaudan aromatic for every type of polish, insecticide, disinfectant and spray. Let Givaudan's staff help you secure effective, economical odor results.

GIVAUDAN DELAWANNA, INC.

330 WEST 42nd STREET, NEW YORK, N. Y.

BRANCHES:	Philadelphia	Los Angeles	Cincinnati	Detroit	Dallas
Baltimore	Chicago	San Francisco	Seattle	Montreal	Havana



*Specialists
for More Than a
Quarter of a Century*

CERTIFIED DISINFECTANTS AND SANITARY CHEMICAL PRODUCTS

for the Wholesale Trade

COAL TAR DISINFECTANTS
PINE OIL DISINFECTANTS
COMPOUND SOLUTION OF CRESOL, U. S. P.
TECHNICAL CRESOL COMPOUND
CRUDE AND REFINED CRESYLIC ACIDS
CRUDE CARBOLIC ACID
HOUSEHOLD INSECTICIDES
CREOSOTE OILS
ANIMAL SPRAYS AND DIPS
LARVAECIDES
PYRETHRUM EXTRACTS
WEED KILLER
BAC-TROL



BAIRD & McGUIRE, INC.

HOLBROOK, MASS.

ST. LOUIS, MO.

Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

INSECTICIDE manufacturers are worried over what they believe to be the non-workability of the new Department of Agriculture regulations covering the labeling of pyrethrum powder insecticides which become effective next September first. This was brought out by discussion at the recent meeting of the National Association of Insecticide & Disinfectant Manufacturers. It was pointed out that the deterioration of pyrethrum presents a problem to those who market this material which places any kind of accurate labeling on a very shaky foundation. With a view to thrashing out the practical problems involved, a committee of the Association is presenting its case before the Department of Agriculture in the belief that some revision of the labeling requirements is needed to avoid unnecessary hardship on insecticide manufacturers.



WITH unusual interest, we note that the Veterans' Administration has issued from Washington a new specification for its liquid insecticide requirements which is just as faulty as its old one. The refusal of the officials of this bureau to accept the commercial standard of the National Bureau of Standards is, to say the least, somewhat peculiar. They must know that this standard represents the opinion of insecticide experts as the best available so far, and that it is backed by much scientific evidence. At the same time, they should also know that the basis for their latest specification is incorrect, long

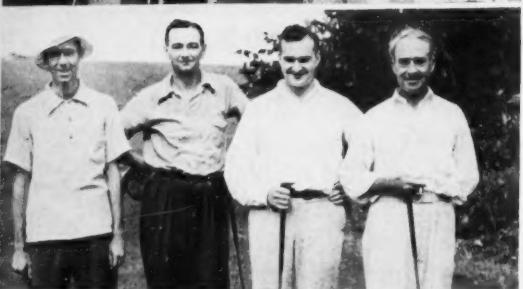
since outmoded, and no guarantee of quality. In fact, it is just the type of specification which permits the shady supplier to do his stuff. But still they refuse to adopt the Bureau of Standards specification. Why?



MANUFACTURERS of hand sprayers complain that the low prices at which the insecticide industry insists upon buying these sprayers, precludes supplying a product of decent quality. This is not news. Both sprayer and insecticide manufacturers have known for a long time that too many hand sprayers on the market,—and not alone the small ten-cent variety,—are mostly junk. They leak, squirt, and drip, and their life span is very short. That they tend to discourage the use of any and all liquid insecticides is quite obvious.

The surprising thing about household insecticides is that much effort and money has been spent on successful improvement of insecticide quality, but little or no attention has been given to the sprayer problem. Cheaper and ever cheaper sprayers are demanded by the insecticide manufacturer. He evidently believes that if his insecticide is up to snuff, the quality of the sprayer which bears his name is of no importance. A good sprayer cannot be supplied at the price which the insecticide manufacturer will pay, and accordingly quality must be cut to meet price.

Cheap, undependable sprayers, in our opinion, are the most serious single problem in the household insecticide field today.



DISCUSS

at 26th summer meeting of National Assn. of Insecticide & Disinfectant Mfrs. at Lake Wawasee, Ind... 200 members hear scientific papers and take part in trade discussions and sports... annual meeting Dec. 2-3 in New York

FOLLOWING the suggestion of Dr. E. G. Thomssen of the J. R. Watkins Co., Winona, Minn., discussion leader at the "Labeling Clinic" held in conjunction with the 26th annual Summer meeting of the National Association of Insecticide & Disinfectant Manufacturers at Lake Wawasee, Indiana, on June 17, 18 and 19, a request for consideration of a revision of the new pyrethrum labeling requirements to be presented to the U. S. Department of Agriculture was adopted in the form of a resolution. The resolution was presented by John A. Marcuse of the West Disinfecting Co., chairman of the resolutions committee, and calls for the appointment of a committee to present the case of the insecticide industry before the De-

partment of Agriculture. Discussion in connection with the "Labeling Clinic" indicated that manufacturers consider the new pyrethrum powder regulations which go into effect next September 1 as unworkable under practical conditions and likely to cause much trouble and hardship in the industry. It was proposed by Dr. Thomssen that a definite minimum of pyrethrins be set by the Department of Agriculture and that no pyrethrum below that minimum be permitted to be termed "insect powder" or "pyrethrum powder."

Two hundred representatives of leading manufacturers of insecticides, disinfectants, and sanitary specialties attended the three-day meeting at Lake Wawasee and heard the various papers on scientific and commer-



PYRETHRUM LABELS

cial subjects, several of which are published elsewhere in this issue in full. Others will be published next month. Proposed revisions in the commercial standards for disinfectants were presented by Dr. E. G. Klarmann of Lehn & Fink, Inc. (CS70-38 and CS71-38) and the specifications as revised were accepted by the Association and ordered sent to the National Bureau of Standards for the customary canvass of the industry prior to general approval and acceptance.

Following the delivery of the paper on "Some Studies on Deterioration of Pyrethrum" by Dr. Alfred Weed of John Powell & Co., there was considerable discussion of deterioration in connection with the new labeling regulations and numerous questions were answered by Dr. Weed. The paper on "Rapid Method for Determining the Toxicity of Livestock Sprays" by Dr. Craig Eagleson of the Bureau of Entomology & Plant Quarantine at Dallas, Texas, brought forth many questions and discussion. (Both papers are published in this issue.)

Other addresses included "Sanitation Control in Dairy Operation" by Dr. G. B. Ulvin, chief chemist for Sidney Wanzer & Sons Dairy Co., Chicago; "Sanitation and Fumigation in Air Transportation" by W. W. Davies of United Airlines, Inc.; "Exporting of Insecticides" by George

C. Payne of the U. S. Department of Commerce; "Non-volatile Solids in Waxes" by Melvin Fuld of Fuld Brothers, Baltimore, a progress report of the Sanitary Specialties Committee; "Moth-Proofing Investigation" by F. W. Fletcher of the Dow Chemical Co., Midland, Mich.

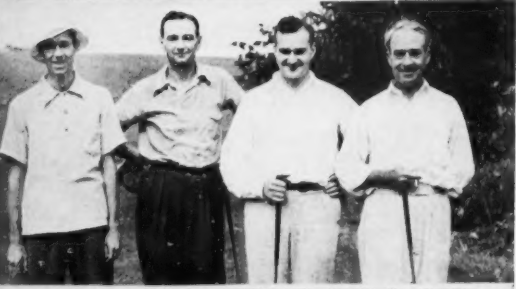
A sports program conducted under the direction of Charles

Furst of the Furst-McNess Co. included a golf tournament, a softball game between the insecticide and disinfectant teams, and a horse-shoe pitching tournament. The golf championship was won by none other than Mr. Furst, himself, with a 76. The horse-shoe pitching championship was won by Marvin J. Rolstead of U. S. Industrial Chemicals, Inc., who fought his way through a field of forty contestants to win easily.

Repeating its victory of 1938, the insecticide baseball team dubbed the "Peet-Grady Bearcats" beat the disinfectant representatives, the "Coefficient Cannoneers," by a score of 4 to 1. The cry of "ringer" was heard often during the game, especially in regard to the star pitcher for the insecticide team, Don Ballman of Dow Chemical who held the disinfectants to four scattered hits, and Joseph Magnus of Magnus, Mabee & Reynard, who starred for the "Cannoneers" and scored their only run. Others who starred were Pat Moran, Harold King (captain of the "Bearcats") and Friar Thompson (captain of the "Cannoneers"), although the latter struck out in the clutch in the last inning. Those who displayed their poor eyesight in performing umpire duties were Harry Ahles, Dr. R. C. Roark, and J. L. Brenn. The record as given by Official Scorer, G. A. Bowden, follows:

1940 ANNUAL MEETING

The 27th annual meeting of the N.A.I.D.M. will be held in New York on December 2 and 3. A hotel has not as yet been selected. President W. J. Zick has announced the committees in charge. The committee on arrangements will consist of Ira P. Mac Nair, chairman; Harold King of R. J. Prentiss & Co., Fred Rauch of S. B. Penick & Co., and John Powell of John Powell & Co. The program committee will consist of C. J. Dumas, Rohm & Haas Co., chairman, A. W. Morrison of Socony-Vacuum, R. F. Joyce of Derris, Inc., and Robert C. White, Jr. of the Robert C. White Chemical Co. The entertainment committee will comprise Joseph B. Magnus, Magnus, Mabee & Reynard, Inc., chairman, Charles Opitz of John Opitz, Inc., W. J. Bjork of L. Sonneborn Sons.



DISCUSS

at 26th summer meeting of National Assn. of Insecticide & Disinfectant Mfrs. at Lake Wawasee, Ind. . . 200 members hear scientific papers and take part in trade discussions and sports . . . annual meeting Dec. 2-3 in New York

FOLLOWING the suggestion of Dr. E. G. Thomssen of the J. R. Watkins Co., Winona, Minn., discussion leader at the "Labeling Clinic" held in conjunction with the 26th annual Summer meeting of the National Association of Insecticide & Disinfectant Manufacturers at Lake Wawasee, Indiana, on June 17, 18 and 19, a request for consideration of a revision of the new pyrethrum labeling requirements to be presented to the U. S. Department of Agriculture was adopted in the form of a resolution. The resolution was presented by John A. Marcuse of the West Disinfecting Co., chairman of the resolutions committee, and calls for the appointment of a committee to present the case of the insecticide industry before the De-

partment of Agriculture. Discussion in connection with the "Labeling Clinic" indicated that manufacturers consider the new pyrethrum powder regulations which go into effect next September 1 as unworkable under practical conditions and likely to cause much trouble and hardship in the industry. It was proposed by Dr. Thomssen that a definite minimum of pyrethrins be set by the Department of Agriculture and that no pyrethrum below that minimum be permitted to be termed "insect powder" or "pyrethrum powder."

Two hundred representatives of leading manufacturers of insecticides, disinfectants, and sanitary specialties attended the three-day meeting at Lake Wawasee and heard the various papers on scientific and commer-



PYRETHRUM LABELS

cial subjects, several of which are published elsewhere in this issue in full. Others will be published next month. Proposed revisions in the commercial standards for disinfectants were presented by Dr. E. G. Klarmann of Lehn & Fink, Inc. (CS70-38 and CS71-38) and the specifications as revised were accepted by the Association and ordered sent to the National Bureau of Standards for the customary canvass of the industry prior to general approval and acceptance.

Following the delivery of the paper on "Some Studies on Deterioration of Pyrethrum" by Dr. Alfred Weed of John Powell & Co., there was considerable discussion of deterioration in connection with the new labeling regulations and numerous questions were answered by Dr. Weed. The paper on "Rapid Method for Determining the Toxicity of Livestock Sprays" by Dr. Craig Eagleson of the Bureau of Entomology & Plant Quarantine at Dallas, Texas, brought forth many questions and discussion. (Both papers are published in this issue.)

Other addresses included "Sanitation Control in Dairy Operation" by Dr. G. B. Ulvin, chief chemist for Sidney Wanzer & Sons Dairy Co., Chicago; "Sanitation and Fumigation in Air Transportation" by W. W. Davies of United Airlines, Inc.; "Exporting of Insecticides" by George

C. Payne of the U. S. Department of Commerce; "Non-volatile Solids in Waxes" by Melvin Fuld of Fuld Brothers, Baltimore, a progress report of the Sanitary Specialties Committee; "Moth-Proofing Investigation" by F. W. Fletcher of the Dow Chemical Co., Midland, Mich.

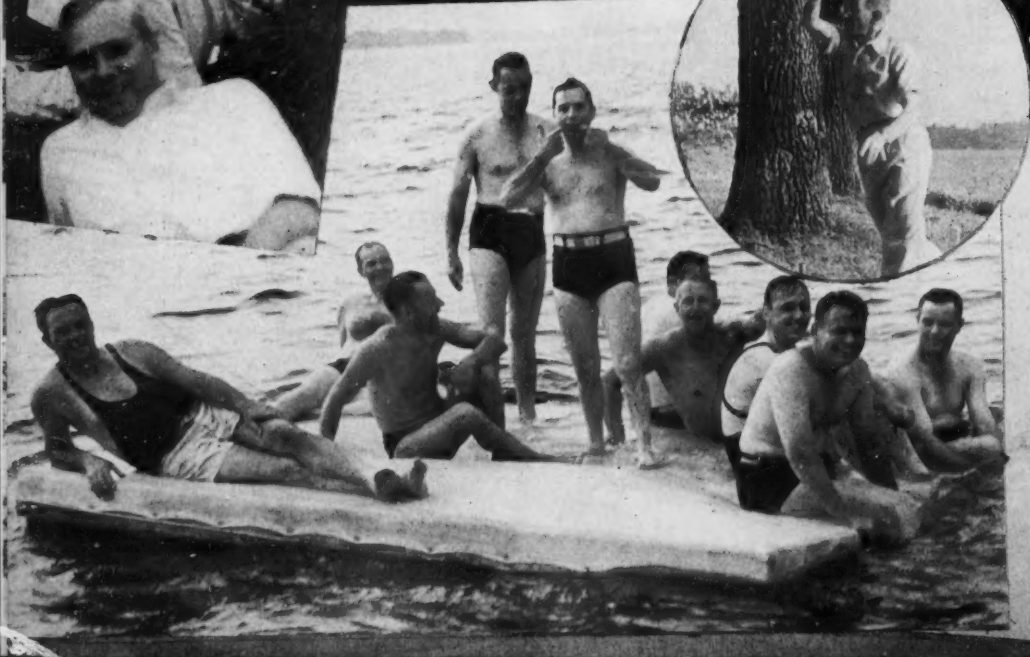
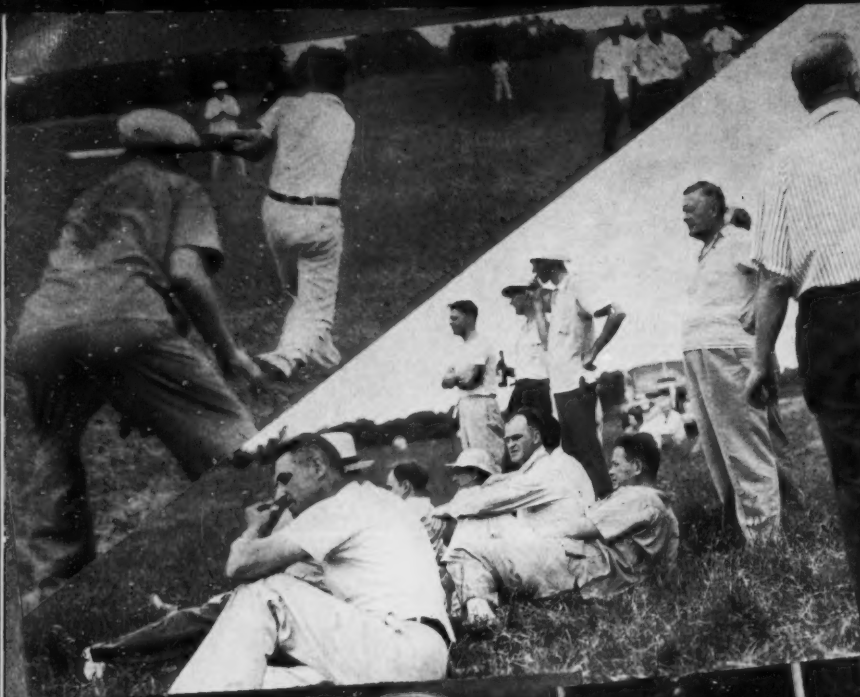
A sports program conducted under the direction of Charles

Furst of the Furst-McNess Co. included a golf tournament, a softball game between the insecticide and disinfectant teams, and a horse-shoe pitching tournament. The golf championship was won by none other than Mr. Furst, himself, with a 76. The horse-shoe pitching championship was won by Marvin J. Rolstead of U. S. Industrial Chemicals, Inc., who fought his way through a field of forty contestants to win easily.

Repeating its victory of 1938, the insecticide baseball team dubbed the "Peet-Grady Bearcats" beat the disinfectant representatives, the "Coefficient Cannoneers," by a score of 4 to 1. The cry of "ringer" was heard often during the game, especially in regard to the star pitcher for the insecticide team, Don Ballman of Dow Chemical who held the disinfectants to four scattered hits, and Joseph Magnus of Magnus, Mabree & Reynard, who starred for the "Cannoneers" and scored their only run. Others who starred were Pat Moran, Harold King (captain of the "Bearcats") and Friar Thompson (captain of the "Cannoneers"), although the latter struck out in the clutch in the last inning. Those who displayed their poor eyesight in performing umpire duties were Harry Ahles, Dr. R. C. Roark, and J. L. Brenn. The record as given by Official Scorer, G. A. Bowden, follows:

1940 ANNUAL MEETING

The 27th annual meeting of the N.A.I.D.M. will be held in New York on December 2 and 3. A hotel has not as yet been selected. President W. J. Zick has announced the committees in charge. The committee on arrangements will consist of Ira P. Mac Nair, chairman; Harold King of R. J. Prentiss & Co., Fred Rauch of S. B. Penick & Co., and John Powell of John Powell & Co. The program committee will consist of C. J. Dumas, Rohm & Haas Co., chairman, A. W. Morrison of Socony-Vacuum, R. F. Joyce of Derris, Inc., and Robert C. White, Jr. of the Robert C. White Chemical Co. The entertainment committee will comprise Joseph B. Magnus, Magnus, Mabree & Reynard, Inc., chairman, Charles Opitz of John Opitz, Inc., W. J. Bjork of L. Sonneborn Sons.



LABELING COMMITTEE

President W. J. Zick of the N.A.I.D.M. in accordance with a resolution adopted at the Summer meeting at Lake Wawasee, Ind. has appointed the following committee to confer with officials of the U. S. Department of Agriculture with a view to requesting the Department to consider changes in the new labeling requirements for pyrethrum powder insecticides which go into effect on next Sept. 1, in order to avoid hardships on manufacturers which it is believed the new regulations may cause. The committee follows: A. E. Badertscher, McCormick & Co., chairman; Walter Silbersack, A. S. Boyle Co.; Charles Opitz, John Opitz, Inc.; Dr. Alfred Weed, John Powell & Co., Ira P. Mac Nair, N.A.I.D.M. secretary

PEET-GRADY BEARCATS

	H	R
Alwyn, ss	1	1
Gothard, Thomas, 1b	1	0
Jones, c	1	0
Ballman, p	0	0
King, sf	0	0
Curlett, Trevison, 3b	1	0
Powell, 2b	0	1
Clark, Allen,		
Olsen, lf	2	1
Rolstead, Carpenter,		
Allen, cf	1	0
Kerstan, Heller, rf	1	1
	8	4

COEFFICIENT CANNONEERS

	H	R
Cozard, 1b	1	0
Sandke, Magnus, 2b	1	1
Speer, Yates, 3b	0	0
Pollnow, ss	0	0
Moran, sf	2	0
Baird, Goldman, rf	0	0
Cooper, lf	0	0
Rapp, Ford, cf	0	0
Hogg, Frazin, p	0	0
Thompson, c	0	0
	4	1

	1	2	3	4	5	6	7
Bearcats	0	0	4	0	0	0	0-4
Cannoneers	0	0	0	0	0	0	1-1

An informal Summer beef-steak dinner was held on Tuesday evening, June 18, and included a fifteen act floor-show under the direction of Adam Breuer of the Breuer Electric Manufacturing Co., Chicago. During the course of the evening, 52 prizes were distributed to winners and others in the various events, the

presentation being made by A. L. van Ameringen of van Ameringen-Haebler, Inc. The prizes were purchased from a fund donated by a group of members whose names are listed below. At the dinner, the famous Brenn Trophy, donated by J. L. Brenn, former president, was presented to the winner, Harold Meyer of S. B. Penick & Co., Chicago, by Dr. E. G. Thomssen of the J. R. Watkins Co. who conducted the special Giants and Pigmies Tournament for the trophy. The list of donors to the prize fund follows:

Allaire, Woodward Co., American Can Co., Aromatic Products, Inc., Atlantic Refining Co., Auto Compressor Co.

Barrett Co., Henry Barroll & Co., Inc., Breuer Electric Mfg. Co.

Candy & Co., Inc., Central Can Co. Continental Can Co.

Davies-Young Soap Co., Derris, Inc., P. R. Dreyer, Inc.

Federal Varnish Co., Fritzsche Bros., Inc.

General Drug Co., Givaudan-Delawanna Inc.

Hercules Powder Co.

Koppers Co.

McLaughlin, Gormley, King Co., Magnus, Mabee & Reynard, Inc., Monsanto Chemical Co.

National Can Corp., Niagara Alkali Co.

Owens - Illinois Can Co., Owens-Illinois Glass Co.

S. B. Penick & Co., Inc., Pennsylvania Refining Co. John Powell & Co., Inc., R. J. Prentiss & Co.

Rohm & Haas Co.

Skinner & Sherman, Inc., Foster D. Snell, Inc., L. Sonneborn Sons, Inc.

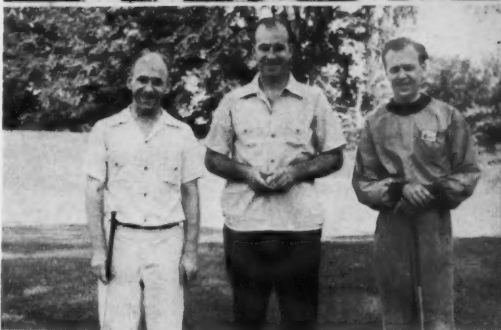
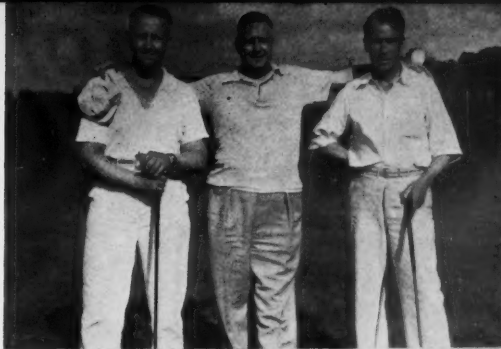
Van Ameringen-Haebler, Inc.

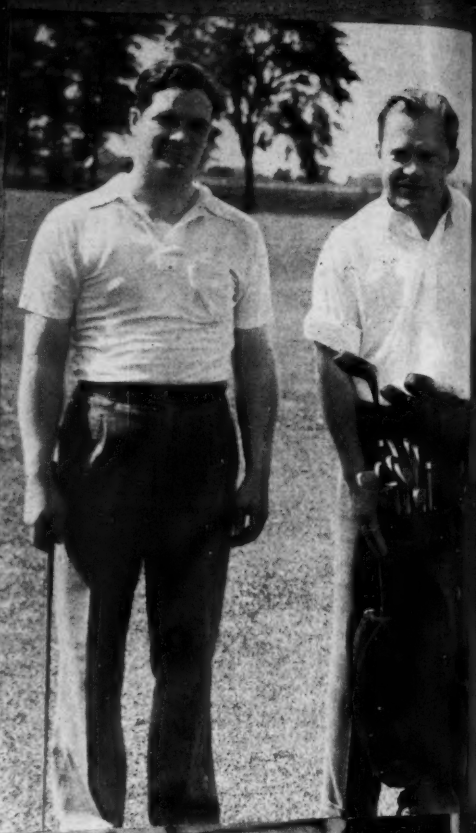
T. F. Washburn Co., The White Tar Co., Williams Sealing Corp., Wilson & Bennett Mfg. Co.

The official registration list at the meeting included the following:

Registration List

Name	Company
Adams, E. W.	Standard Oil—Ind.
Ahles, Harry J.	John Powell & Co.
Allen, William W.	Dow Chemical Co.
Alwyn, T. E.	American Can Co.
Annan, Thomas P.	Huntington Labs
Ballman, D. K.	Dow Chemical Co.
Badertscher, A.	Edison—McCormick & Co.
Baldwin, H. W.	Baldwin Labs, Inc.
Baird, Gordon, M.	Baird & McGuire, Inc.
Barnhart, C. S.	Ohio State University
Beirne, J. J.	National Can Corp.
Benedict, L. D.	Midway Chemical Co.
Bertrand, E. F.	Owens Illinois Glass Co.
Bevernick, A. W.	R. J. Prentiss & Co.
Booth, C. F.	Fritzsche Brothers





Bowden, G. A.—A. S. Boyle Co.
 Brenn, J. L.—Huntington Labs.
 Brenn, Earl—Huntington Labs
 Breuer, Adam A.—Breuer Elec. Mfg. Co.
 Brownstein, Henry J.—Hysan Products Co.
 Bush, R. W.—Dodge & Olcott Co.
 Campbell, Chas. G. W.—John Powell Co.
 Carpenter, Thos. L.—Sinclair Refining Co.
 Carpenter, J. H.—Koppers Co.
 Clark, D. E.—Dr. Hess & Clark, Inc.
 Cleveland, C. R.—Standard Oil Co.—Ind.
 Cooper, H. D.—Koppers Co.
 Corl, Cady S.—Allaire Woodward & Co.
 Cotchett, Joseph W.—Williams Sealing Co.
 Cowin, R. O.—Standard Oil Co.—Ohio
 Curlett, John N.—McCormick & Co.
 Davies, James N.—Henry Barroll & Co.
 De Lacy, J. H.—National Can Corp.
 Dolge, Karl—C. B. Dolge Co.
 Dorland, G. A.—*Soap*
 Dorman, S. C.—Shell Oil Co.
 Dumas, C. J.—Rohm & Haas
 Eddy, W. B.—Rochester Germicide Co.
 Eller, J. R.—Fritzsche Bros.
 Fenn, John F.—Continental Can Co.
 Flanagan, M. J.—Federal Varnish Co.
 Fletcher, Fred—Dow Chemical Co.
 Flett, Alex—Continental Can Co.
 Ford, Jared H.—Kilgore Dev. Corp.
 Frazin, Henry—Central Can Co.
 Fuld, Melvin—Fuld Bros.
 Furst, C. W.—Furst McNess Co.

Gauer, J. A.—Fritzsche Bros.
 Goltermann, Carl A.—Williams Sealing Corp.
 Gothard, N. J.—Sinclair Refining Co.
 Grady, A. G.—Sinclair Refining Co.
 Green, A. H.—Continental Can Co.
 Green, James A.—Standard Oil—Ind.
 Hamilton, H. W.—White Tar Co.
 Hanley, C. A.—Felton Chemical Co.
 Harris, H. H.—McConnon & Co.
 Hedenburg, Oscar F.—Rex Research Corp.
 Heller, Preston B.—B. Heller & Co.
 Hill, Don—Williams Sealing Co.
 Hogg, G. F.—Hercules Powder Co.
 Huckins, F. O.—Sinclair Refining Co.
 Husen, Dr. Werner R.—Commerce Petroleum Co.

Jakob, O. G.—Continental Can Co.
 Jackson, Ralph O.—West Disf. Co.
 Janney, Wm. R.—National Can Corp.
 Jones, Lester W.—McCormick & Co.
 Joyce, R. F.—Derris, Inc.

Kampmeier, A. G.—Rohm & Haas
 Kampmeier, Carlos—Rohm & Haas
 Kersten, Earl W.—Dodge & Olcott Co.
 Kimball, C. S.—Foster D. Snell, Inc.
 King, H. R.—R. J. Prentiss & Co.
 Klarmann, Dr. E. G.—Lehn & Fink Products
 Klock, F. Y.—McLaughlin Gormley King
 Kummerow, G. E.—Owens Illinois Can Co.

Wins Brenn Trophy

HAROLD MEYER, manager of the Chicago branch of S. B. Penick & Co., was the winner of the coveted Brenn Trophy at the summer meeting of the N.A.I.D.M. at Lake Wawasee. The trophy was donated by J. L. Brenn of the Huntington Laboratories, Inc., former president of the N.A.I.D.M. for a Giants & Pigmies Golf Tournament, entry to which was confined to men over 6 feet-2 inches and under 5 feet-5 inches. Dr. E. G. Thomssen of the J. R. Watkins Co. managed the competition and presented the cup to Mr. Meyer at the beefsteak dinner, announcing that the winner had shot a neat, but not gaudy 147 strokes on the Wawasee course to win by one stroke. There



were 18 other competitors for the cup.

The Brenn Trophy is a very handsome piece of bedroom crockery trimmed in gold with solid porcelain cover and hand-embroidered silencer. In accepting the cup, Mr. Meyer stated that he appreciated the honor and assured the gathering that it would never again be used except in case of dire emergency.

Kunz, Dr. E. C.—Givaudan-Delawanna, Inc.

Lawson, John H.—Federal Varnish Co.
 Lowenstein, Leo—D. A. Collins Mfg. Co.

Lum, Dudley F.—Givaudan-Delawanna, Inc.

La Cava, L. J.—Continental Can Co.
 Lawrence, F. I. L.—Atlantic Refining Co.

LeGear, H. E.—Dr. L. D. LeGear Med. Co.

Lemmermeyer, M.—Aromatic Products, Inc.

Lockhart, R. M.—Candy & Co.
 Lynch, David W.—John Powell & Co.

McConnon, H. G.—McConnon & Co.

McLaughlin, G. A.—McLaughlin, Gormley King

MacNair, Ira P.—*Soap*

Magnus, J. B.—Magnus, Mabee & Reynard

Magee, M. L.—J. F. Washburn Co.

Marcuse, John A.—West Disinfecting Co.

Meyer, Harold—S. B. Penick Co.

Moburg, H. W.—Rex Research Corp.

Moffat, F. M., Jr.—U. S. Industrial Chemicals

Moran, J. P.—Wilson & Bennett Mfg. Co.

Morgan, Thomas—*Soap*

Murphy, D. F.—Rohm & Haas

Mueller, Robt. M.—Rohm & Haas

Mueller, John H.—Rohm & Haas

Nelson, Franklin C.—Stanco, Inc.

Nelson, Henry A.—Chemical Supply Co.

Noble, Harold—S. B. Penick Co.

Olsen, Ralph—S. B. Penick

Pillet, Al—E. I. du Pont

Patterson, K. L.—Stanco Distributors

Pabst, A. C.—Socony Vacuum Oil Co.

Philbrick, Burton G.—Skinner & Sherman, Inc.

Pollnow, W. F.—Vestal Chemical Co.

Poole, O. M.—Derris, Inc.

Powell, John—John Powell Co.

Quortrup, R. C.—Barrett Co.

Rapp, Frank—Hercules Powder Co.

Rauch, Fred F.—S. B. Penick Co.

Rolstad, Marvin J.—U. S. Industrial Chemicals

Rosenbauer, F. W.—Owens Illinois Can Co.

Sandke, Robert J.—L. Sonneborn Sons

Sherrick, J. L.—Baldwin Labs.

Simanton, W. A.—Gulf Research Co.

Smith, C. E.—Socony Vacuum Oil Co.

Sommer, Chas. H., Jr.—Monsanto

Chemical Co.

Speer, R. L.—Shell Oil Co.

Stevenson, R. M.—Givaudan-Delawanna, Inc.

Stokes, J. W.—Breuer Elec Mfg. Co.

Swearingen, A. B.—United Coopera-

tives, Inc.

Simmonds, G. L.—U. S. Sanitary

Spec. Corp.

Thacker, Geo. A.—Continental Can Co.

(Turn to Page 127)

LIVESTOCK SPRAYS...

A rapid method for
determining their toxicity*

By. Dr. Craig Eagleson

Bureau Entomology & P.Q., U.S.D.A.

THE technique to be described herein was primarily developed for use in research on sprays designed to kill flies on livestock¹. A method was desired by which several materials might be tested with reasonable accuracy but without expenditure of excessive time at the task. Besides accomplishing this aim, this method seems to offer other advantages over methods commonly used for assaying commercial livestock sprays, as it provides a satisfactory means of comparing the effects of the various toxicants used.

This method of estimating the relative toxicity of livestock sprays differs from others now widely used (1) in applying the insecticide as a direct beam in a tunnel, (2) in revolving the cage of insects during application, and (3) in maintaining uniform ventilation throughout spraying and the subsequent observation period. The results obtained by this method are believed to be a truer index to the behavior of sprays as applied under actual conditions of use than the results from other methods that have been employed.

It is the consensus of opinion among dairymen in the locality of Dallas, Tex., that even the best commercial sprays as applied in barns or sheds do not kill houseflies (*Musca domestica* L.) or stableflies (*Stomoxys*

calcitrans [L.]). The easily killed horn flies (*Haematobia irritans* [L.]) are, however, reasonably well controlled by them.

There appear to be two outstanding causes for the unsatisfactory results obtained from commonly marketed livestock sprays. (1) During hot weather when flies are abundant, it is not feasible to close barns and sheds, as recommended, to provide for the fumigatory action of petroleum-base sprays. (2) Sprays compounded on the basis of tests made in a fumigatorium are likely to be too weak when applied in well ventilated situations.

It has been observed that with certain toxicants the percentage of mortality of sprayed houseflies is considerably less where ventilation is good than in poorly ventilated places. Furthermore, the period of paralysis of flies not receiving a fatal dose is much shorter if the flies are well aerated. It is well known that houseflies can be rendered torpid and yet recover completely from both pyrethrum and thiocyanate sprays.

In open barns, where escape is easy, wary pests such as stableflies and houseflies leave the locations where insecticide is being nebulized, usually receiving an insufficient amount of spray to paralyze them.

Doubtless many of the commercial livestock sprays now on the market give a satisfactory kill in chamber methods designed for testing household sprays. In view of the unsatisfactory results obtained with

these sprays in barns and sheds, however, it seems that chamber and settling-mist techniques may not be entirely appropriate for evaluating livestock sprays. It appears reasonable that a method that simulates conditions in barns would be more useful in the compounding and assaying of such sprays than a test applied in a closed compartment.

Rearing and Feeding the Test Insect:—The housefly *Musca domestica*, is used as the test insect, as it was found to be more resistant to common sprays than either *Stomoxys calcitrans* or *Haematobia irritans*. Larvae are reared in tubs of fermenting crimped oats.² When the larvae are full grown a culture is dumped on a sieve. The larvae leave the oats and drop through a funnel into a pan, where they pupate in damp excelsior. The pupae are removed and graded as to size by being passed over perforated metal sieves. The pupae which pass through 2.8- by 15-millimeter openings and are retained by 2.5- by 15-millimeter openings are placed in an aging cage for emergence (fig. 1). Uniform flies from one entire culture are thus made available for sampling. Practically a 50:50 sex ratio is obtained. The adults are provided a food gel containing banana pulp, sugar, milk, and gelatin (Eagleson 1937).

Equipment and Method:—The equipment and method here described were developed in an effort to

* Paper presented before the 26th annual mid-year meeting, National Assn. of Insecticide & Disinfectant Manufacturers, June, 1940.

¹ The general plan of using a spray tunnel and revolving cylindrical fly cage in the testing of livestock sprays was first put into use by H. M. Brundrett and F. C. Bishopp in 1927 at the Dallas laboratory of the then Bureau of Entomology.

² Not the "rolled oats" processed for human consumption.

overcome some of the chamber methods' disadvantages such as (1) fumigatory effect, (2) overly sustained period of exposure to the spray, (3) uncontrolled conditions for recovery, (4) time-consuming manipulations, and (5) expensive equipment. It was designed to simulate field spraying and yet maintain control over the physical conditions of the experiment and the physiological conditions of the insects. Fumigation is practically eliminated by spraying in an aerated tunnel.

The method is rapid. A test of five or six spray materials, each applied to ten lots of flies, can be easily completed in four hours' working time. Only the size of the recovery cabinet limits the number of tests that can be included in one series on a single culture of flies. In comparison, the mean number of replications per day for the Peet-Grady method at ten laboratories was 9.3 (4,650 flies, with the large group method) (Campbell and Sullivan 1938), and with Campbell's Turn table method about 25 replications (2,500 flies) can be made in eight hours.

Flies to be sprayed are placed in 9- by 17-centimeter cylinders of 14-mesh screen wire (fig. 2). The ends are screen discs soldered into metal screw bands (obtained from wide-mouthed Mason jars). The ends fit snugly into the cylinder, screen side inward, so that no protection from the direct spray beam is afforded the insects.

A cylinder is filled with 50 to 75 flies by darkening the aging cage (fig. 1) and holding the cylinder

Fig. 2, Spray cylinders.

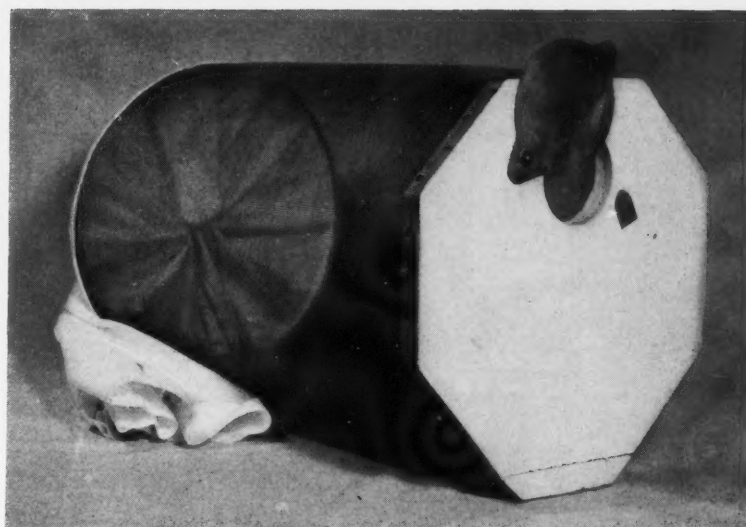
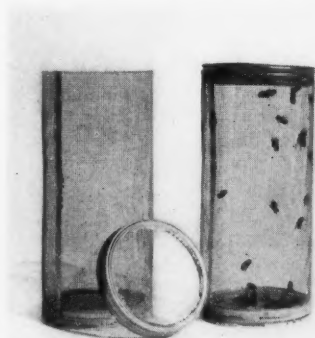


Fig. 1, Aging cage.

against the port in its end. Experience makes possible rather uniform filling of the cylinders. All the insects are driven from the cage into the cylinders, so the entire population is used. After being filled the cylinders are randomized to provide for a still greater uniformity in the sample. A spray lot usually consists of ten cylinders. Spray cylinders are always washed in benzene or aviation gasoline after each use.

The spray tunnel is a tapering, reinforced sheet-metal tube (figs. 3 and 4). It is open at the smaller end and discharges into a hood and filter-column (not shown) packed with fine steel wool. A constant, controllable stream of air is drawn through the tunnel and filter by a vacuum cleaner. The spray mist is effectively absorbed by the filter and the dust bag on the cleaner. The flies receive only the insecticide that contacts them as a traveling mist, and after the measured dose has been atomized, they are bathed in clean air. An opening in the center of the tunnel permits insertion of the spray cylinders into a rotating mechanism which turns the cage at 80 revolutions per minute. A sliding glass plate closes the opening during the spray discharge. Spraying the flies in a rotating cylinder improves the chances of uniform spray application to the entire surface of each fly.

The atomizer produces a fan-shaped spray. The air and liquid feed tubes are holes 0.8 millimeter in diameter, diverging at 30-degree angles, bored in a solid block of brass (fig. 5). The insecticide is pipeted into a funnel on the feed tube of the atomizer and flows by gravity through the two apertures, which exactly intercept the air jets. The delivery of the usual dose (2 cc.) requires about 2 seconds. The spray produced is a non-fluctuating mist, uniform throughout its cross section. (A single jet was found to produce a "bull's-eye" pattern.) Air under a pressure equal to 75 centimeters of mercury flows continuously through the atomizer. Eddy currents, which result when a jet of air is suddenly turned on or off in the tunnel, are avoided by the continuous flow.

Before each experiment the functioning of the spray equipment is checked by placing a paper target over a cylinder inserted in the tunnel and spraying it with dyed kerosene. Relative uniformity of particle distribution, density of mist, and droplet size of the spray applied in each experiment can be ascertained and adjustments in air pressure, velocity of the draft through the tunnel, and direction of spray beam made if necessary.

Atomizers with oil delivery tubes of various sizes may be used to produce similar spray mists from

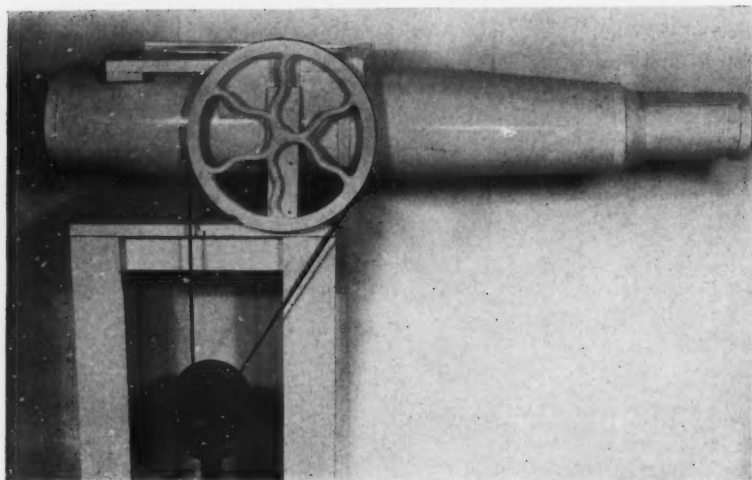


Fig. 3, Side of spray tunnel.

materials of widely differing viscosity. However, for comparing the relative value to the user, of various sprays, the same atomizer and same quantity of spray should be used. Undoubtedly the major portion of livestock spray is applied with cheap discontinuous hand sprayers not especially designed to suit the viscosity of a particular fly spray. The atomizer used in the spray tunnel is effectively the same, merely inverted to facilitate accurate dosing by pipette measurement. Since viscosity is a factor in field performance of livestock spray, a more practical comparison of two sprays is had by applying equal quantities of both with the same atomizer.

A uniform time after spraying (depending upon the time necessary for the flies to become paralyzed) the flies from all cylinders sprayed with the same material are placed together in a recovery cage for observation. These cages are 30 centimeters wide, 40 centimeters long, and 10 centimeters high, with 14-mesh screen top and bottom.

The recovery cabinet in which the sprayed flies are placed for observation is maintained at constant temperature and humidity and with a constant air flow (16 meters per minute). Fresh air is continuously introduced into the chamber, and, as the shelves are of hardware cloth, a constant flow of air reaches every sprayed fly.

Effect of Aeration on Mortality:—An indication of the neces-

sity for proper aeration of experimentally sprayed flies is given by the following experiments:

One test was made on 1,820 flies in 32 spray cylinders. The Official Test Insecticide of the National Association of Insecticide and Disinfectant Manufacturers was sprayed at a medium lethal dose of 1.5 cc. Cylinders of sprayed flies set in 1-gallon syrup buckets (uncovered), to cut off direct air currents yet avoid fumigation, were placed alternately between spray cylinders set on the hardware-cloth shelves of the recovery cabinet. All flies were provided with food and water. At the end of 7 hours mortality was 15 per cent higher in the unventilated spray cylinders (53.5 per

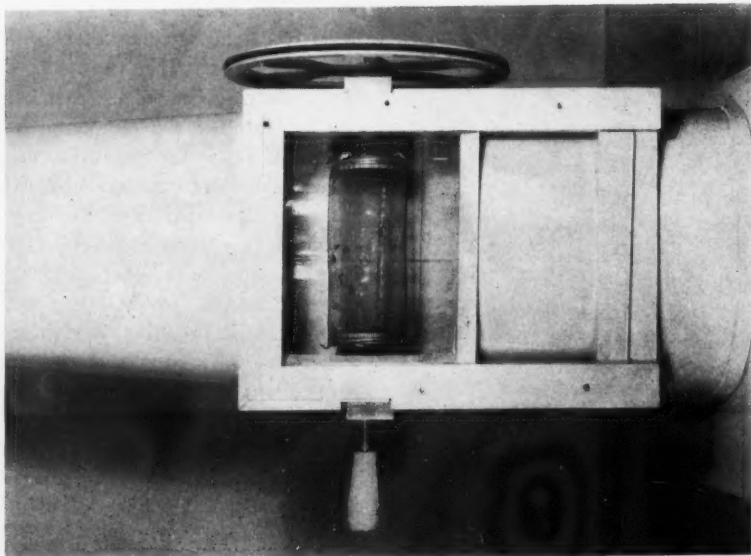
cent compared with 38.2 per cent in the ventilated containers).

A second test was made in which a median lethal dose of pyrethrins in a petroleum distillate of 330 to 340° C. boiling range was applied to 751 flies in 10 spray cylinders. Ten minutes after they were sprayed the flies were placed in two screen-bottomed recovery cages and provided with food and water. One cage was placed in the recovery cabinet in a 22-meters-per-minute air flow. The other was placed on a laboratory bench at a similar temperature, but without forced ventilation. The unventilated flies showed 20 per cent higher mortality (69.3 per cent compared with 49.6 per cent in the ventilated group).

A third test was conducted in the same manner as the second, and with the same dilution of pyrethrins but dissolved in a carrier used in the manufacture of household spray (a highly refined odorless kerosene of 200 to 250° C. boiling range). The unventilated flies placed on the laboratory bench showed a 14 per cent higher mortality (51 per cent compared with 37 per cent for the ventilated flies).

It appears that the mortality from livestock sprays is reduced by ventilation more than is the mortality from household-type sprays. Accordingly it is more important that live-

Fig. 4, Cylinder in position for spraying.



stock sprays be assayed under aerated conditions than household sprays. Here again it seems that the standard Peet-Grady method is ill fitted for the assay of livestock sprays. Flies sprayed in barns enjoy considerable ventilation, and if this is not provided in laboratory tests the assay cannot be considered dependable.

Treatment of Data:—The median lethal dose of pyrethrins in the author's equipment at 30° C., 50 per cent relative humidity, and 16-meters-per-minute air flow is 1.5 cubic centimeters of the Official Test Insecticide. Insecticides tested may be rated relative to the Official Test Insecticide in the manner now official with the Peet-Grady method. A more desirable procedure has been suggested by Bliss (1939), in which two different doses of both the standard insecticide and the one under test are administered to flies of a single culture, and comparisons based on the dosage-mortality curves obtained. The ease of making large numbers of replications with various doses within the space of a few minutes makes the spray tunnel technique admirably suited to Bliss's procedure.

Like other methods of fly-spray evaluation, this method provides relative values of toxicity—that is, values relative to the performance of a standard insecticide applied to an identical lot of flies under identical conditions. It is usually assumed that the result obtained by the application of the standard spray is a functional expression of the influence of all variables affecting the experiment. If so, then the discrepancy in observed toxicity due to the variation in conditions from one experiment to another can easily be compensated.

The mean mortality of the lot sprayed with the control material is adjusted to equal the ideal value for the control (50 per cent mean kill in these experiments) and a corresponding adjustment made in the data from experimental material. This adjustment is made by means of a table based on the area of the normal curve (Ford 1937). After making such adjustments the values of insecticidal power obtained in any experiment

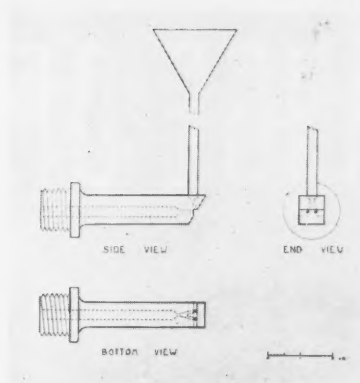


Fig. 5, Sketch of atomizer.

may be logically compared with those obtained in any other.

The time elapsed between spraying a median lethal dose and the time a true mortality figure could be obtained was determined for a spray of pyrethrum extract in refined kerosene. In five 9-replicate experiments hourly observations were made of the number of flies remaining torpid. The flies were sprayed with the Official Test Insecticide and recovered at 30° C., 50 per cent relative humidity, and 16-meters-per-minute air flow. The adjusted hourly means of these experiments are plotted in figure 6. It appears that a true value for mortality resulting from such a pyrethrum insecticide under these conditions may be determined after the fifth hour, since no recovery occurred thereafter.

As an example of this method of evaluating livestock sprays the data in table 1 are presented. The experimental materials were commercial livestock sprays procured on the open market. A chemical analysis of each was made by the Food and Drug Administration, U. S. Department of

Agriculture. The pyrethrin I content was determined by the Seil method except in the cases noted; the thiocyanate content was determined by the Food and Drug Administration Method 741-revised. The control was the Official Control Insecticide of the National Association of Insecticide and Disinfectant Manufacturers.

Each material was tested in two 8-replicate experiments. By means of the statistical table mentioned above (Ford 1937) the mean percentage of mortality in each experiment was adjusted and the mean of the two adjusted means determined. The standard error, s_x (that is, of the mean of the two adjusted means), was calculated from the formula

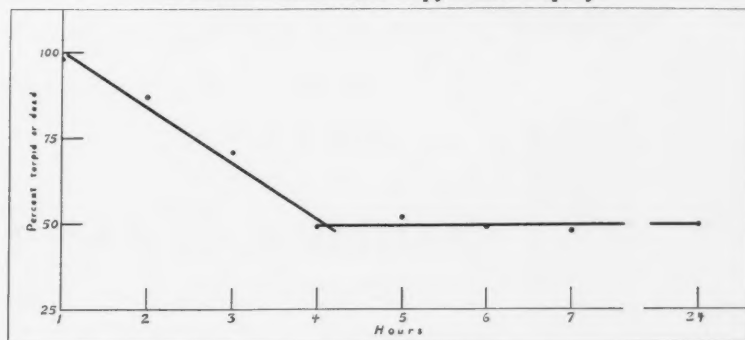
$$s_x = \sqrt{\frac{\Sigma x^2}{n(n-1)}}$$

The materials in each group of table 1 were listed in the order of increasing toxin content according to chemical analysis.

Discrepancies between chemical analysis and actual effect in biological tests are obvious. The chemical evaluations do, however, roughly indicate the range of the median lethal dose (number 5 is an exception, with pyrethrin I content apparently reported in excess).

It will be noted that sprays of the same reported pyrethrin I content (numbers 1, 2, and 3) vary in toxicity. Since the unsulfonatable residues are nearly equal, the variation in specific gravity is the only other reported factor which might cause the differences in toxicity. However, when these data are plotted, mortality against specific gravity of carrier, there is not

Fig. 6, Time of maximum recovery from a medium lethal dose of pyrethrum spray.



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PYRETHRUM DETERIORATION

*By Dr. Alfred Weed**

John Powell & Co., Inc.

ONE of the unhappy limitations of pyrethrum for use as an insecticidal raw material is the fact that it gradually loses its ability to kill insects as it becomes older. This is due to the loss in the amount of active principles (pyrethrins) which are affected by air, temperature and light. It is not the purpose of this discussion to consider the importance of these natural factors that destroy the toxicity of pyrethrum, but it would not be out of place certainly if every seller of pyrethrum powder or pyrethrum products carried a phrase on his package such as "store where cool, dark and dry" or "keep away from heat." Carrying this idea one step further—a non-warranty phrase such as employed by the agricultural insecticide people might not be out of place particularly if these factors affecting pyrethrum could be embodied in said phrase. Something of this nature is indicated at the present time because of the new yardstick which will be used in measuring the quality of pyrethrum powder—the question of deterioration in a given period of time (the time the marketer carries the powder) and the tendency on the part of our industry to make claims too numerous to mention.

This discussion is supposed to be a starter for consideration of the new requirements for labeling of pyrethrum which were thoroughly covered in the April issue of *Soap*. I have no tables of data, for to the best of my knowledge, these do not exist with consecutive assays over a period of time on pyrethrum powder made by the official method—the Mercury Reduction. Messrs. Gnadinger and Corl; Dr. A. Edison Badertscher and Harold Noble are to be thanked

for submitting figures by other methods of assay from which we can but estimate losses had the samples been run by the Mercury Reduction Method.

We are all agreed that deterioration occurs, but with a few exceptions, the extent of deterioration starting off with powder of about the same pyrethrins content is quite different six months or a year or more later. Naturally, laboratory differences can be expected (even where the same method is used on the samples) and the fact that different methods have been used still further complicates the picture. Containers, conditions of storage, and fineness of grind—all undoubtedly contribute their share to the differences.

In our own work on deterioration where we have worked with the same grind, containers and storage conditions—we have significant differences in the amount of pyrethrins lost starting out with powder of approximately the same strength. Such differences can only be overcome by experience on a greater number of samples.

Grouping and averaging the data made available—the following simple table shows the range of deterioration. No reference is made to source of flowers but the data can roughly be grouped as set forth:

LOSS IN PYRETHRINS IN POWDERED PYRETHRUM

Initial Quality	% Lost in 6 mos.	% Lost in 12 mos.	% Lost in 24 mos.
.5%- .6%	9-15	12-20
.8%-1.0%	10-16	16-24	30-36
1.1% and up	14-20	21-25	30-40

These figures represent average high and low losses as reported. Some laboratories have data showing less deterioration than the lowest figure in the table; others have higher losses than the figures shown.

Dr. Badertscher reports some very interesting figures on old samples of powder; some of which were sold by McCormick and Company before methods of analysis were in use. One of these samples—nine or ten years old—still contains .39 per cent pyrethrins. Another dating back to 1918-1920 contains .42 per cent pyrethrins. It is evident from these old samples of powder and several others which have been assayed three to six years after they were prepared—that while deterioration or a loss in pyrethrins may take place for a considerable length of time, the speed of loss slows down appreciably in the later life of the powder. It is also evident from the foregoing table that almost as much pyrethrins are lost during the first six months as during the ensuing eighteen months.

If one may generalize on the table of averages, it would seem that a figure of 15 per cent loss for a year on low-test powder would be acceptable; with 20 per cent for standard quality and possibly 25 per cent for extremely high-test material.

The trade practice for several years has been that of selling pyrethrum powder with a guarantee of 0.9 per cent total pyrethrins through the month of February; 0.75 or 0.80 per cent total pyrethrins thereafter, until new crop is available (September).

Depending upon the quality of the crop, this practice will either have to be modified or taken into account by the marketer in setting up his ingredient statement to meet the new requirements. While the practice appears to

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 17, 1940.



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Livestock sprays made with PROTESSENOL and a small proportion of an effective knockdown agent have an adequate knockdown, an exceptionally high twenty-four-hour kill, plus substantial moribund kill and give effective and enduring protection to the animals. PROTESSENOL sprays repel flies both by vapor repellency and by the contact irritation and leg paralysis provided by Derris extractives.

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have been generally acceptable—the marketer who arranges his labels to accommodate 0.9 per cent powder, and then accepts 0.75 per cent, is flirting with trouble.

NO decision appears to have been reached by bulk marketers like ourselves as to whether the trade practice guarantees shall be continued; whether a uniform quality shall be provided at all times; or what attitude will be taken towards the differences apparent between the Mercury Reduction Method and Seil's method, which we have used for some time.

We are building up data on samples, by both methods, and at this writing feel that for practical purposes we find 10 per cent less pyrethrin I by the Mercury Reduction Method than we do by Seil's method. This figure is not a set one and may run 5 per cent more or less. For practical purposes, however, we find no difference in the amount of Pyrethrin II by these methods. It has been our experience that in powder in which Pyrethrin I and Pyrethrin II are present in equal amounts; or where more Pyrethrin I than Pyrethrin II is present—the Mercury Reduction Method shows its greatest effects on total pyrethrins present. Using a series of ratios we find this hardly significant and in round numbers a figure of 5 per cent will cover this difference.

If you have been using 0.9 per cent powder (Seil) your deliveries will approximate 0.85 per cent by the Mercury Reduction Method. With a 20 per cent deterioration figure for 12 months — and for all-around safety some may wish to use a figure of 25 per cent—it is doubtful if one would be safe in declaring the presence of more than 0.65 per cent pyrethrins.

The extent of deterioration during the "shelf-life" of pyrethrum powder; the lowered pyrethrin figure attributable to the Mercury Reduction Method; and the indicated wish on the part of the Food and Drug Administration that pyrethrum powder carry a declaration of .75 per cent pyrethrins make for a complicated situation. These, coupled with the interest of

some in declaring the inerts (everything but pyrethrins); others favoring a definite statement for the amount of pyrethrins present (the active ingredients under the new regulation) further complicate matters.

Most of us have asked numerous questions of Washington in order to arrive at some sound basis for a decision. They will not permit of giving the pyrethrin content under the phrase "when packed" as obviously this might foster intentional misbranding. On the other hand, without more deterioration data than now appears available, and with the time on the retailer's shelf an unknown factor, what is the marketer to do? Should pyrethrum powder below a certain pyrethrin content, let us say 0.75 per cent be considered unsalable — it would mean the recall from the dealer of such stock below this quality, magnifying in the public eye the need for "fresh stock," and putting the industry where it was a score of years ago. Such a regulation might well mean the end of the retail pyrethrum powder business.

By contrast, what attitude will Washington have towards 1 per cent pyrethrin content powder — if, for safety, it is shipped under a guarantee of 0.5 per cent? Here is a 100 per cent understatement which is as surely mis-branding as the reverse would be—if accuracy in one's statements is to govern.

All of these questions should be thoroughly discussed at these meetings and if possible a definite expression should be developed temporarily at least. If it seems desirable, more specific data on the extent of deterioration might be developed. Dr. McDonnell will be with us and he will undoubtedly be willing to express himself on this subject.

In the way of a summary it can be said that marketers of pyrethrum powder are faced with deteriorations in 12 months averaging 15 to 25 per cent of the original amount of pyrethrins present. Figures available may be lower or higher than the above. Based on powder assaying .9 per cent by the Seil method, with a 5 per cent allowance for the differ-

ence between the Mercury Reduction Method and the Seil Method; and with the assumption that this difference will be in part apparent on deteriorated powder in 12 months time, this powder could be expected to contain between .64 and .72 per cent pyrethrins and in 24 months time it might be as low as .5 per cent.

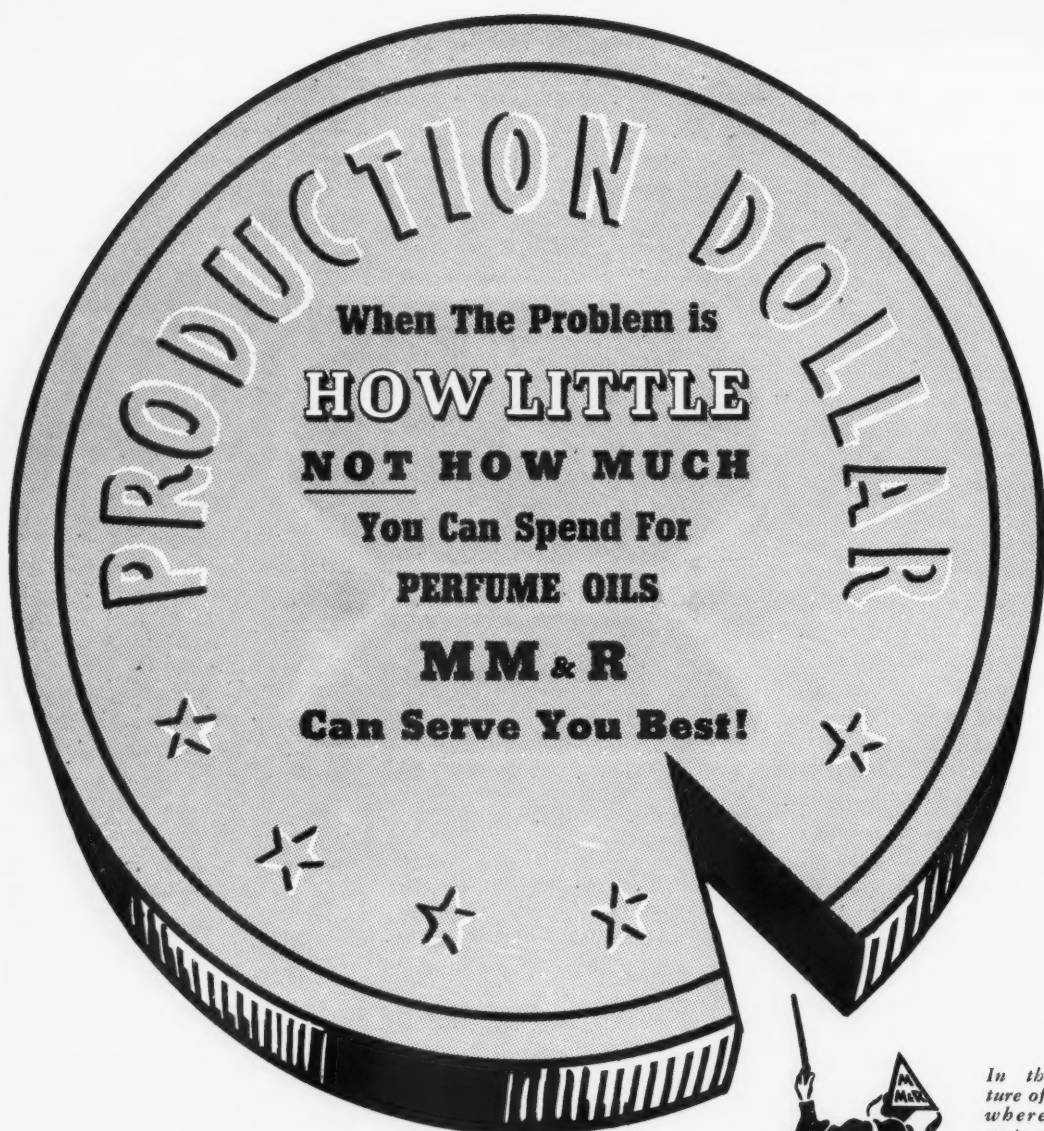
Deterioration to this extent, in terms of the new labeling requirements for pyrethrum powder, makes it imperative that the marketer label his product, considering this normal loss in strength, using a figure as low as is acceptable in Washington,—for he can have no assurance once his powder has left his plant as to what mal-treatment it may be given that may speed up and increase its pyrethrin loss.

— • —

An emulsifying agent suitable for the preparation of aqueous wax emulsions consists of a product formed by the reaction of a fatty substance with morpholine or a derivative of morpholine. In this way a wax-soluble soap is produced which keeps the wax dispersed in such small particle size that it will dry bright or with substantial luster when merely applied to a surface and exposed to the atmosphere without rubbing. The emulsifying agent is stable in the presence of water but decomposes on drying, after which it loses its ability Carbon Chemicals Ltd. Canadian to re-emulsify in water. Carbide & Patent No. 387,403.

— • —

When concentrated nitric acid was added to trichloroethylene drop by drop in the proportion of three parts to 20 respectively, and the reaction product was distilled with steam, a light yellow oil was obtained. This oil has a strong action against insects, 0.7-1 pound being sufficient for 1000 cubic feet of space. The properties of the product resemble those of chloropicrin; specific gravity 1.665 and boiling range 110-70° C. It contained chloropicrin, its isomer and methyl amine. Mitio Kono and Tadasi Sakai. *J. Agr. Chem. Soc. Japan* 15, 478-82; through Chem. Abs.



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LABELING INSECTICIDES

By Dr. E. G. Thomssen*

J. R. Watkins Co.

THE publicity currently being given to the Food, Drug and Cosmetic Act of 1939 has reflected renewed interest in the Insecticide Act of 1910 among our membership and elsewhere. There are some who confuse the Insecticide Act of 1910 with the Food, Drug and Cosmetic Act of 1939. Let me say, first of all, that these are two distinct acts, enforced by different officials.

When I was asked to make this report of the Labeling Committee, I consulted an attorney friend in order that I might have a better knowledge of the technicalities of the 1910 Insecticide Act. I asked him to state the provisions of the 1910 Insecticide Act in short terms. He kindly abstracted the law for me as seven commandments. These are:

I. Thou shalt not *introduce*, (and this means that the offense is committed at time of introduction or delivering), any adulterated or misbranded insecticide into any state or receive and deliver in unbroken packages any adulterated or misbranded insecticide.

II. Thou shalt obey the regulations of the three secretaries, Treasury, Agriculture and Commerce and Labor, when they stay within the terms of the act.

III. Thou shalt be subject to the act only when you kill, repel or mitigate insects or fungi. The act does not include worms, rodents or other vermin.

IV. Thou shalt not fail in professed strength or purity nor substitute any substance nor remove any constituent nor use any substance injurious to vegetation.

V. Thy package and label shall not bear a false or misleading statement, design or device. In this regard it is to be noted that "The Code of Federal Regulations," regulations 180.10 and 180.16 say the package may not contain misleading circulars. (These regulations go beyond the act and are probably invalid, I am advised.)

VI. Thou shalt not misname the product or label or brand it to deceive or mislead, or substitute contents of the package or fail to state the weight and measure.

VII. Thou shalt label the names and percentages of inerts or the names of insecticidal or fungicidal elements with the percentage of the inerts. This provision raises an interesting point in the recent regulations as to the labeling of pyrethrum, which we will discuss later.

All of us who are in the insecticide business should know all about the Insecticide Act and regulations, which are considerably shorter than other acts controlling similar products. The Insecticide Act has been on the statute books for about thirty years. Nevertheless your labeling committee has had raised to it some questions during its short existence of six months which should be touched upon. Among the questions which have arisen during this period the following may be selected:

... 1.

Are insecticides subject to the Food, Drug and Cosmetic Act of 1906 or 1939?

... 2.

Are they subject to the regulations under that Act?

In both cases the answer is "No." The Food, Drug and Cosmetic Act of 1939 applies by its definitions,

only to products which are either (a) food or drink (or chewing gum); (b) effective upon or against any disease or body function; or (c) for cleansing or improving bodily appearance (except soap). If your product, therefore, is not to feed nor to cure nor to improve the appearance of the insect, human or otherwise, you do not come under the F. D. & C. Act and for this you can be very thankful. I can say this very pointedly because my work puts me on the edge where I have a part of my anatomy under each act and believe me I can truthfully say it is cooler in the insecticide frying pan than in the F. D. & C. fire.

The Food, Drug and Cosmetic Administration has been transferred (on June 30th), under the President's Reorganization Plan No. 4, from the Department of Agriculture to the Federal Security Agency. The Insecticide Division is changed from the Food and Drug Administration to the Department of Agriculture.

A few further comments regarding these two acts as they may affect our membership's products are in order. We have products which may be considered both vermifuges and insecticides. The makers of vermifuges are not classed as "insecticides" but as "medicinalists." They have no concern with the inert ingredients upon their label but have label troubles of their own. The Insecticide Act applies only to preparations for controlling insects and fungi. Insects and fungi are defined in regulations 180.14 and 180.15 in the code as they apply to the Insecticide Act.

When it was attempted to amend the Insecticide Act, the Department proposed to put in the same definitions of labels and labeling that are in the 1939 Food, Drug and Cos-

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 18, 1940.

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Pat. Sept. 1934 Pat. Aug. 1938

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• Fumeral Stationary and Portable Diffusers are recommended and sold by leading manufacturers and distributors of insecticides and fumigants. See 1939 "Soap Blue Book." Write for illustrated literature, "Modern Warfare On Insects," data, and prices.

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metic Act. That is to say, they wished to include circulars as labeling and make the statements of the circular as subject to offense, as the statements on the label are now by statute. This, according to the legal opinion which I have received, demonstrates two things. One is that Regulations 180.10 and 180.16 are really not in effect because if these regulations were effective they would not have to add the matter (as proposed) by this amendment. Second, it proves that the Food, Drug and Cosmetic Act and the regulations under it have no effect upon insecticides and their manufacture and sale. The F. D. & C. Act already contains a provision that labeling and labels include the circulars packed with or in the package. If, then, the F. D. & C. Act applied to our products when we manufacture and sell insecticides, there would be no need to add this provision to the Insecticide Act by amendment. If the regulations under the F. D. & C. Act applied to the manufacture and sale of insecticides, there would be no need to amend the Insecticide Act thus because the regulations under the F. D. & C. Act already make similar provisions.

I am furthermore informed that now that the F. D. & C. Act has been transferred to the Federal Security Agency and the Insecticide Division is left in the Department of Agriculture it will be clearer to everybody that we have a short act with concise regulations which appear in "The Code of Federal Regulations" for 1939, Sections 180 and point plus. Our labeling troubles under these regulations, while they may be sore at times, are within a narrow compass and are not related to the troubles of manufacturers of products like foods, drugs and cosmetics. Let me say this, however, that if any member of this Association is tempted to manufacture a cold cream that kills or even repels mosquitoes think twice before you label it under the Insecticide Act.

... 3.

This question has been raised. Suppose a product deteriorates after it has been delivered in interstate

commerce. Is the manufacturer guilty of adulteration or misbranding? My lawyer's answer to this question was "No, not guilty unless the product was adulterated or misbranded at the time it was introduced in interstate commerce; that is, at the time it was shipped (unless it was adulterated or misbranded when later resold by the manufacturer in unbroken shipping container)."

... 4.

Another question which has come to our attention is how far are the regulations of the three secretaries mentioned in the act binding upon manufacturers? The secretaries are given general "power to make rules and regulations for carrying out the provisions of the act." My legal friend again tells me that the Supreme Court has spoken to the Secretary of Agriculture and other secretaries of the departments on this subject more than once to the effect that the regulations are invalid if they lay any burden upon the manufacturer greater in weight or breadth than the burden laid by the act. The Supreme Court, then, has stood against any danger of bureaucracy of this sort for many years, it seems, in spite of information to the contrary. No regulation is valid if it does more than literally carry out the provisions of the act. That is the reason my lawyer friend has based the seven commandments on the terms of the law and not on the regulations.

Any regulation which defines and limits the products which are subject to the law is clearly valid because it carries out the provisions of the act. A regulation, however, which broadens the burden, saying for example that the phrases which may not appear upon the package or the label may not appear either upon any circular with or within the package, probably broadens the act so that the regulation is invalid. There is a law which states what the label or package may say. When the regulations go on to say what the circulars in or outside the package may say, it is a regulation and not a law, and a law made by regulation, my lawyer tells me, is

ineffective. This the Supreme Court has said in cases cited herewith.

Tracy vs. Swartwout 10 Peters 80
Morril vs. Jones, 106 U. S. 466
Philadelphia vs. Stimson, 223 U. S. 605
Sante Fe vs. Lane, 244 U. S. 492
Waite vs. Macy, 246 U. S. 606
International vs. Davidson, 278 U. S.
U. S. vs. George, 228 U. S. 14
Williamson vs. U. S. 227 U. S. 425

In making these statements, I have not lost sight of a practical consideration which must be taken into account. The regulations referred to may not be valid *in court* but they are binding upon the administrative officers of the Agricultural Department until the courts or the secretaries set them aside. If a regulation is not too stringent the manufacturer in his desire to cooperate with the department is more likely to obey it than to take a stiff-necked attitude and contest the matter in the courts. This, many manufacturers feel, may lead to unpopularity upon their part with the department.

... 5.

The most discussed question of the year has to do with the ruling of January 25, 1940, effective September 1, 1940, regarding the labeling of pyrethrum. You are all familiar with this ruling which requires the pyrethrin statement as the active ingredient of a pyrethrum powder alone or in combination. It is very recent and has already been announced thoroughly in our bulletins.

If you will read the whole Insecticide Act closely you will note that it does not forbid the statement of *all* the ingredients, both active and inert. That is, if pyrethrins are the active ingredients of pure pyrethrum powder you may show on your label, for example

Active Ingredients Pyrethrins	1%
Inert Ingredients	
Pyrethrum Flower Fibres..	99%
Total	100%

The act requires you to state the names of the inert ingredients and their percentages and permits you to state the names of the active ingredients and their percentages.

The statute says you must state the active ingredients which in this

(Turn to Page 115)

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PRICE LIST AND CATALOG

DISINFECTANT LABELING

By Dr. Eric C. Kunz*

Givaudan-Delawanna, Inc.

THE concern of the government with product labels, including those for disinfectants, is primarily the protection of the public that purchases the manufacturers' goods. Labeling abuses have been common in the past, and in the light of present day knowledge the extravagant claims which were common in labeling fifty years ago are incomprehensible today. There is no doubt, for instance, that on the basis of the definition of the word "disinfectant" issued by the Department of Agriculture in May, 1917 ("a disinfectant is a killer of bacteria" S.R.A. No. 15) that excessive claims have often been made as to the value of many disinfectants in actual use. Many disinfectants in the past were advertised or labeled as capable of killing all bacteria, with the result that more regulations appeared. The object of these regulations has been to define the killing power of a disinfectant, first by expressing it in the form of a phenol coefficient; that is, its relative effectiveness, time and concentration considered, to a phenol standard. Since various techniques have been used in establishing the phenol coefficient, it is necessary that whenever you give the phenol coefficient in your labeling, you also mention what method you have used in determining this factor.

Second, it was found that one chemical may be very effective in killing one type of bacteria, but very ineffective in killing another. Therefore, extreme care has to be observed in labeling not to make any general statements implying greater effectiveness than the product actually possesses.

Disinfectants can be lined up in two classes; first, those intended or

usable on inanimate objects; second, those intended or usable on animals and human beings. At least, that was the old conception. When classified in such a manner, the disinfectants of the first group,—those used on inanimate objects—fall under the Insecticide Act. Very little can be said on the label or labeling of this type product. No differentiation was made between label and labeling in that law or the regulations which followed the law. It was simply necessary that you state plainly the type of disinfectant, and that you give precise information on the amounts of the active ingredients, and also inactive ingredients which it contained.

Your disinfectant also could be a fungicide, since the definition of a fungus under the Insecticide Act and regulations at that time was a non-chlorophyll bearing plant, mold, rust, smoot, mildew, yeast or bacteria. A fungicide fell ipso facto under these very same laws and regulations.

It is therefore not astonishing that some products on the market, properly labeled under the Insecticide Act, were picked up by the Department of Agriculture as being ambiguous in their claims,—giving the impression that they were capable of killing everything that crawls around a household in the form of an insect and bacteria, or that appears in the form of a mold or a fungus. In the course of this evolution, the phenol coefficient was introduced, and served, and is still serving, as an attempt to measure or evaluate the efficiency of a disinfectant.

Such were the disinfectant labeling problems twenty or thirty years ago. Today, as the result of the enactment of the Food, Drug and Cosmetic Act, all sections of which will be in full force and effect July 1, 1940, disinfectant manufacturers have

more regulations to observe. They must also consider the gradual appearance of newer disinfectants, that is products outside the old cresol type or creosote type or in the form of hypochloride.

The Food and Drug Act, as you know, is new. Few, if any, court decisions are available which would determine how far the interpretations of the Act given by the Administrative Board will ultimately have to be observed or will be strictly enforced. Opinions, at the moment, are of course purely speculative. However, after carefully studying the Act, I have arrived at fairly definite personal impressions as to just how I believe our enforcement agencies will interpret this Act so far as disinfectants are concerned. I may be all wrong in my theory, but I am not going too far when I say that my theory is fully covered by the law, the regulations, and even some old court decisions on file.

I BELIEVE it is extremely difficult today to bring on the market a disinfectant which is not a drug. If it is a drug, it has to be labeled as a drug, and its labeling will have to conform to the Drug Act. Let us go over the Drug Act and see the definition of a drug. The Act says that "any chemical intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or other animals, any chemical which affects the structure or any function of the body of man or other animals is a drug." But it goes further than that. It not only includes preparations which are intended for cure, mitigation, prevention, or treatment of disease, but also those which are actually used or can be used for such purposes, even if not intended for that use. It is in this definition of

* Before Natl. Assn. Insecticide & Disinfectant Mfrs., Lake Wawasee, Ind., June 18, 1940.



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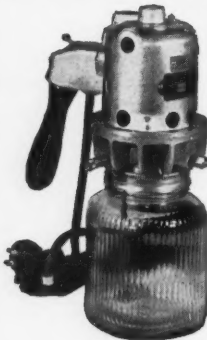
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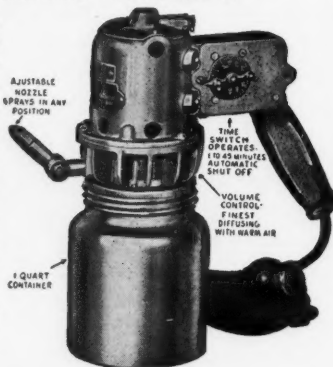
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a drug that I see a practical impossibility of drawing a clear distinction between an article offered on the market as a disinfectant and labeled accordingly, and a drug which should be labeled according to the laws and regulations of the new Drug Act.

To illustrate this contention, take the example of a cosmetic containing a drug, either a hormone or a bactericide, in quantities sufficient to be of therapeutic value. It is admitted that such a cosmetic, even if the label does not mention the hormone or the bactericide, on its label, its labeling or in its advertisements, is no longer a cosmetic; it is a drug.

Another example may be a common disinfectant, either of the chlorine type or of the cresolic type, used in a room where there are people with contagious diseases. That disinfectant, used in that sick room, is intended and actually does kill bacteria microbes, and in so doing prevents the spread of disease. Under the definition of a drug, as contained in the new Drug Act, that disinfectant has become a drug as soon as it is proven that it has become common practice to use that disinfectant for the prevention of a disease "in man or other animals." Since the Drug Act includes animals, a similar condition naturally can occur in the household, farms, and so on.

Another example of possible confusion as to whether a product should be labeled according to the Insecticide Act or the Drug Act, will come up more and more in the future due to the evolution of new products, which may have better killing power or be less poisonous or less irritating than disinfectants now on the market. These newer products are in my interpretation of the Drug Act, drugs right from the beginning. You may use them in the preparation of household disinfectants and your labeling and advertising may omit any mention that the product could be used on human beings and animals, and for that reason you may think your new product should go on the market with the

labeling as prescribed under the old Insecticide Act. It is nevertheless a fact that the chemical or chemicals used are or can be of therapeutic value and sooner or later will be used in the household on human beings or animals in one form or another for the cure or prevention of disease. If this is the case, your product automatically becomes a drug, and should be labeled as such.

If this theory is only half-way correct, then it is time that we give some consideration to the regulations of the new Food, Drug and Cosmetic Act, since it would include automatically practically all disinfectants. A great number of opinions have been expressed on the proper definition of a disinfectant, an antiseptic, a bactericide, a fungicide or a germicide. It appears to me that for the label of any product that falls under the Drug Act, your product has to do exactly what it claims to do. A germicide has either to kill all germs or it has to kill the germs which you claim it kills when your preparation is used according to your directions. That is true, I believe, in the same sense of a fungicide, a bactericide, and so on.

The new Drug Act makes an exception for the claim of an antiseptic, which might be a germicide or might simply inhibit the growth and propagation of germs, under the form and directions as recommended in your labeling. This is particularly the case if it is used in the form of an ointment, a wet dressing, or a dusting powder, in which case it involves a prolonged contact with the body.

I have already given you a definition of a disinfectant, expressed in the Insecticide Act. You will find in a later court decision a newer definition which reads as follows: "A disinfectant is a product capable of completely destroying vegetative forms of germ life under conditions of use." Here again you find this persistent implication that classification of the product does not depend solely on the claims which

you are making, or on the use for which your product is intended.

UNLIKE the Insecticide Act, the Drug Act makes a distinction between the label and the labeling. The Insecticide Act defines the label as whatever message you have on the container, around the container or in the container, whereas the Drug Act calls this the labeling. The label under the Drug Act is restricted to that part of the labeling which is affixed to your containers, or which you may call the front side. Any other descriptive matter, in whatever form or shape it may be, belongs to the general labeling. The label itself not only should be affixed to the immediate container of your article, but the full label should also appear on the outside wrapper of any retail package. In case your outside wrapper or container is transparent so that the printed matter on the label can be read easily through it, you can dispense with repeating your legend on this part of your package.

The labeling and naturally the label also should contain not only the truth, but the whole truth and nothing but the truth. An omission of the whole truth in your labeling is considered equally as much a violation as an overstatement of the value of your product.

As a simple instance, take the hypothetical case of an ordinary cresolic disinfectant which is fortified with a product which has a phenol coefficient of 1,000. Even if you add one-tenth of one per cent of such chemical to your ordinary cresolic disinfectant, you are obliged to mention it, if it is evident that its therapeutic value is a fact in your preparation.

There is one class of products for which the label is comparatively simple. This includes the products listed in the U. S. Pharmacopoeia, the Homoeopathic Pharmacopoeia, or in the National Formulary. You can simply designate your product with the official name, as long as it complies in every respect with the description given in those compen-



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diums. Should it differ in any respect with the official standard, you must state plainly each and every difference.

Your label should contain the name and place of business of the manufacturer, packer or distributor. Special provisions have been made in case you have more than one place of business, or in case you are not listed in the telephone book. Second, the label should contain an accurate statement of the net content in terms of weight, measure or numerical count. The regulations cover this subject in considerable detail. For instance, you should not give your weight as being 16 fluid oz. It should read: "One Pint," always indicating the net content, naturally. You are allowed, even encouraged, to use the metric system, using the terms, "liter," "millimeter" or "cubic centimeters," which shall express the volume at 68°F., equal to 20°C. In case you express your weight in pounds, as is customary for solids, do not use a multiple of ounces for quantities over one pound. Say "One lb. and 4 oz." or "One and one quarter Lb." Here also you are allowed to use the metric system, using the terms "grams," "kilograms," and so on. Always state the minimum quantity as far as possible, and the average quantity only if it differs little from the minimum and your net content is normally more than the average quantity stated.

Should you decide to put on the market a disinfectant in the form of capsules or tablets, the container should mention how many tablets it contains, except in case there are less than six tablets in the container which can easily be counted.

Should your drug, in the form of a disinfectant, contain alcohol, you have to indicate on your label the exact amount of the alcohol it contains, in the form of its percentage of absolute alcohol at 60°F., equal to 15.56°C. If you simply say alcohol, it means ethyl alcohol. Should the product contain any other alcohol, such as isopropyl alcohol, or even methyl alcohol, then the

label should contain the exact name of such alcohol, together with the content.

You no doubt will want to put on your label the phenol coefficient of your disinfectant, and if so specify clearly the method you have used. Use the utmost care not to make any overstatements and no general statements from which overstatements could be deduced by the purchaser.

Special attention must be given to the setting up of the label. It should be so printed that it can be read by the normal eye without any strain. Do not put in unusually large letters the portions of the label which you would like the purchaser to read first and perhaps only, and then that part to which the government believes most attention should be given in very small letters.

CONVEY to the public the full contents, the full measure, and any safeguarding information which are either required by law under the Caustic Poison Act and any other act or which you think are necessary to avoid accidents or discomfort due to irritation, burning or otherwise. Should your product normally and naturally deteriorate as time goes on, you are forced to indicate such deterioration.

Preparations, for instance, containing more than 2 per cent carbolic acid as a therapeutic active ingredient should bear a note on the label reading: "Warning—When applied to fingers and toes, do not use a bandage. Apply according to directions for use, and in no case to large areas of the body."

Preparations containing cresols, cresotes, guaiacol or coal tar derivatives which are intended for use as douches or could be used as such should have a note: "Warning: The use of solutions stronger than those recommended may result in severe local irritation or burns or serious poisoning." The same products if intended for surface application should have a warning reading: "Apply according to directions for

use and in no case to large areas on the body."

This may be considered as a harsh treatment from an advertising point of view, but if you consider that even castor oil has to have a warning notice, then indeed the above requirements are not exaggerated. Sooner or later almost every drug will have a warning on its label with the result that in a short time the public will pay little attention to such warnings, except the ones which are commonly known and proven.

In case you want to color your disinfectant, the Drug Law allows you to do so, provided you use a color from a certified batch. These colors are now used exclusively by the cosmetic industry, and are available in almost any shade desired. It is not necessary to state the type of color on your label.

Should your product contain as a drug any flavoring or perfume, you need not mention it on the label or labeling. No exact regulations have been set up in this respect. Discussions are going on between the Department and various interested factors and it is believed that an equitable solution will be found shortly. It may be that no specific mention will be required of the flavoring or perfume if the products used are of no therapeutic value, non-irritating and used in a percentage of a fraction of one per cent only.

Special provisions have been made in the act for labels of very small containers, where insufficient space is available to include the entire legend. Where such cases occur, which is hardly probable in the disinfectant line before we have created disinfectants of much higher potency than the ones now available. I would suggest that you submit your case directly to the administration. Or should you decide to use a language other than English, then your legend should be placed on the container equally prominent and equally complete in both languages.

Care should be taken further not to make any statements on the



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label itself, printed or in the form of a design, which are not required under the Drug Act, since such statements may divert the attention of the purchaser from that part of the label which is required by the Act.

THIS as far as the label is concerned. The labeling itself (which is any descriptive matter printed or indicated otherwise upon any article or its containers or wrappers or which may in separate form accompany your article as a written, printed or graphic matter) should first contain adequate directions for the use of your article. It should also contain any warnings, paying special attention to the possibility that your product may be used by or on children where its use may be dangerous to health or unsafe in the dosage recommended for adults. The directions given in the labeling should be adequate, and no omissions should occur. Directions for use should include all conditions for which such drug is prescribed, or suggested, or for which such drug is or can be commonly used.

With reference to the dosage, it is necessary to include dosage not only for the normal, average man or woman, but also for children and old people, should less have to be used in such cases. The frequency of administration or application should be indicated; also the duration.

Should your product be unstable, this fact must be mentioned. The purchaser must be advised as to what to do so as to obtain full value when he uses it. Should it deteriorate, adequate description of such possible deterioration should be found in your labeling.

However, it is hardly conceivable that any products now on the market with which we are familiar, used as disinfectants and which could be classed as a drug, would need any such precautionary measures.

The Drug Act contains special regulations exempting from the law drugs intended solely for investigational use by qualified experts.

It would appear that bulk shipments, too, are exempted from most of the provisions of the Drug Act with reference to label and labeling. Such bulk containers should naturally carry the name of the product. They should also carry instructions as to any safety measures necessary in handling or to be observed when opening the containers. It is advisable in all such cases to have a clear understanding between shipper and receiver of the contents of such bulk shipments as a safeguard in the process of handling the shipment and as a safeguard for its proper ultimate sale and use.

As a final recommendation, I would suggest that if you are designing a label or writing the labeling for a disinfectant, you should first read carefully the new Food, Drug and Cosmetic Act, beside the older acts with which you are familiar. Then after writing your text, read the laws and regulations again, and confirm to your own satisfaction that what you have done corresponds in each particular with those laws. After that, send your copies to an authority, such as the Food and Drug Administration itself. The administration will gladly review your label and your labeling and give you such advice as they think is necessary, so that you may comply in every respect with their present interpretation of the laws concerning disinfectants and drugs.

Labeling Insecticides

(From Page 107)

particular case comprise 100 per cent pyrethrum flowers or ground pyrethrum flowers. These flowers are active because they contain pyrethrins. Up to this time it has been permissible to designate pyrethrum flowers as the active ingredient but now the regulation may be going beyond the law because after a fashion it compels us to mislead the consumer in a scientific sense. Insecticides are not sold to chemists. Probably most of us chemists have no need of insecticides because the picking is too poor to encourage infestation. Insecticides are sold to common people with common

educations and common sense. When, therefore, the farmer or the gardener sees on the label that the only active ingredient in a large package of pyrethrum flowers is only 1/100 part thereof he is surprised and suspicious. He may consider that this one part should be extracted from the 100 parts and sold to him in the pure state because the other 99 parts are only added ingredients and, therefore, adulteration. He is misled into the idea that if we would only sell him one part of pure pyrethrins he could add the other 99 parts of diluents from the sand or sawdust in his own back yard. In our business we have actually encountered this sort of condition when labeling products in accord with regulations and in my humble opinion this pyrethrum case is a fallacy in labeling to which we are compelled by the regulation.

In this regard let me say just another word. All manufacturers in this association are just as concerned with the man who buys our products and accepts them as the government departments. We probably are more concerned. The buyer of our products and ourselves keep each other in employment. As confusion in labeling results, it will give the common garden variety of user considerable question as to whether or not he is being imposed upon by the manufacturer. Would it, therefore, not be better in the case of pyrethrum to set some minimum limit as to pyrethrin content to term a product "pyrethrum" in interstate commerce rather than to raise this doubt in the mind of the practical tiller of the soil and probably restrict the use of our products?

I think that the facts set forth in this ruling should have more attention from our association than they have had. Our consumers have been taught to know what pyrethrum flowers are, but they most certainly do not know anything about the chemistry of pyrethrins.

. . . 6

The last question which came up in this labeling situation is like the old distinction an Irish friend of mine used to make: "There is a great deal of difference whether it is 'Out

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of the house, McCarthy' or 'McCarthy, out of the house'." You may state in your labeling, if of course you can verify the fact, "Active Ingredients 100 per cent" but you cannot say "100 per cent Active Ingredients" because administrators hold that no ingredient is always 100 per cent active. This point should be remembered when labels are prepared.

Livestock Sprays (From Page 99)

even a rough approach to a linear relationship. Specific gravity of the insecticide is evidently not the cause of the variation. It must be concluded that the chemical assay of toxicants and determination of specific gravity, distillation range and unsulfonatable residue of the carrier are not an adequate index to the toxicity of livestock sprays.

There is a considerable discrepancy between mortality and the reported toxic content of the thiocyanate sprays.

Summary: A technique is described for assaying the insecticidal

power of livestock fly sprays, wherein emphasis is placed on the provision of forced ventilation of the insects during spray application and the observation period. The object is to achieve better simulation of conditions under which livestock sprays are used.

From 14 to 20 per cent less mortality was observed among houseflies when well aerated after spraying than when protected from currents of air, as when placed in screen cages having solid bottoms.

Examples of results of the method of assay are given. It is indicated that a chemical assay of toxicant is not an entirely adequate or dependable index of toxicity for livestock sprays.

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tests of liquid spray contact insecticides. *Soap* 14(6): 119-125, 149, illus.

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Pyrethrin I Determination

In the mercury reduction method for determining pyrethrin I excess filter paper in the titration mixture is to be avoided, as its presence tends to produce difficult and less readable end points. The application of the Wilcoxon method to samples of practically pure chrysanthemum monocarboxylic acid and of a commercial pyrethrum oleoresin indicates that linearity of results exists in the first case, but a marked non-linearity exists in the second case, confirming previous work. The color changes observed in the Seil color reaction are concluded to be the result of the formation of a colloidal dispersion of metallic mercury or of some mercury compound which, on standing, undergoes spontaneous successive increases in particle size until a coarse suspension of blue color is formed.

Holaday's revised method of analysis of commercial insecticides removes substances other than the pyrethrin I acid that might give reaction with the potassium iodate used in titrating mercurous chloride formed by the action of pyrethrin I acid on Deniges' reagent. Evidently interfering substances of this sort are present not only in commercial insecticides but in the pyrethrum oleoresin as well, and it is these that give the non-linearity that has been noted with the use of the unmodified Wilcoxon method.

In the Wilcoxon procedure the use of precipitants other than sodium chloride has no advantage. However, the time elapsed between the addition of Deniges' reagent and the addition of sodium chloride solution can be reduced to 15 minutes from the hour specified by Wilcoxon, provided the mixture is centrifuged briefly following the sodium chloride addition. Clarence S. Sherman and Robert Herzog. *Ind. Eng. Chem. Anal. Ed.* 12, 136-7 (1940).

Table 1.—Comparison of chemical analysis and biological assay of livestock sprays

Sample No.	Toxicant	Quantity Per Cent by Weight	Specific Gravity	Distillation Range Degrees C.	Per Cent	Unsulfonatable Residue Per Cent	Mortality* Per Cent \pm \bar{s}
1	Pyrethrin I	.03	.8077	150-250	90	76	36 \pm 1.6
				250 +	10		
2	Pyrethrin I	.03	.8150	120-250	86	76	88 \pm 3.0
				250 +	14		
3	Pyrethrin I	.03	.8733	Practically all above 300° C.		72	96 \pm 2.5
4	Pyrethrin I	.04	.8380	190-300	70	84	74 \pm 3.5
				300 +	30		
5	Pyrethrin I	.06	.8346	150-250	44	74	84 \pm 1.6
				250 +	56		
6	Pyrethrin I, Thiocyanate	.01 .36	.8006	180-250	81	86	26 \pm 5.5
				250 +	19		
7	Pyrethrin I, Thiocyanate	.03† .21	.800	175-200	96	70	16 \pm 7.0
8	Pyrethrin I, Rotenone	.01 ??	.8390	150-250	40	74	76 \pm 3.0‡
				250 +	60		
9	Pyrethrin I, Thiocyanate	.044‡ .376	.980	(Water emulsion)	—	—	89 \pm 1.0
10	Thiocyanate	.49	.835	240-350	80	74	56 \pm .5
11	Thiocyanate	.56	.8584	250-300	36	78	84 \pm .5
				300-350	57		
12	Thiocyanate	.667	.7891	200-225	69	93	67 \pm 3.0
				225-250	21		
13	Thiocyanate	.702	.7941	200-225	69	89	54 \pm 1.0
				225-250	24		
14	Phenols	4.5	.8576	170-250	34	72	78 \pm 2.5
				250-300	10		
				300 +	56		

* Mortality counts made after the fifth hour, except in the case of sample No. 8 (pyrethrin I and rotenone).

† Pyrethrin I determined by the Mercury Reduction Method.

‡ Mortality counts made after 24 hours. In the case of rotenone-bearing sprays it is necessary to wait at least 24 hours before taking mortality data.



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. . . good insecticides deserve to be applied properly . . . look into DULA sprayers.



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Designed for thorough pest annihilation . . . and at a saving of time, labor and money. Requires no preliminary preparations. Does not waste a drop of fluid. Gives insecticide finest possible diffusion and longest possible floating suspension. Automatic shut-off. Operates simply and easily on any current. Heavy duty durable construction.

Write Today for Complete Details, Prices and Descriptive Literature.

DULA MFG. CO. INC., 351 Atlantic Ave., Brooklyn, N. Y.

Manufacturers to the Wholesale Trade Only

Liquid "40" for Economy

Convenience and Saving in
Our Concentrate 40% Liquid Soaps

GLYCEROLE and BABCO concentrate (40%) liquid soaps are heavy bodied, odorless, and free from rancidity. Made from the finest of refined Coconut Oils, American Potash, and distilled water, these soaps contain no free alkali or irritating inactive matter. Leaves the skin velvety soft. Lathers profusely, rinses easily.

Filtered at temperatures below 0° Centigrade, GLYCEROLE and BABCO assure you of crystal clear liquids for use at all temperatures. An excellent soap base.

Your best bet for economy in use is the 40% concentrate as it lends itself for varied liquids of lower soap content. Make any strength soap you need—all out of one container. In addition to our 40% concentrate we can offer you soaps in strengths of 15%, 20%, and 30%.

For complete dilution directions ask for our "Soap Dilution Chart."



Peck's

5224-40 NORTH 2nd ST., ST. LOUIS, MO.
NEW YORK KANSAS CITY

PRODUCTS COMPANY

Manufacturers for Jobbers Exclusively

Do You Need Special ROTENONE and DERRIS RESINS?

No matter what your requirements may be the chances are we can supply a suitable product. DERRIS, Inc., raw materials are used in all types of finished insecticides—household, horticultural and agricultural. Investigate the advantages of using these specialties in your sprays and powders.

Derris Powder — Cube Powder
of Finest Grind

DERRIS, Inc.

79 WALL STREET

NEW YORK, N. Y.

Economy in Building Maintenance

By H. S. Malm*

The Cleveland Arcade

THE problems encountered in maintenance of an office building such as the Arcade, through which 40,000 people pass every day are somewhat different from those met in the average office building. The Arcade, on Euclid Avenue, Cleveland, houses 100 stores and over 300 offices and employs a maintenance staff of 80 people, about half of whom are engaged in janitor work. In order to perform an efficient and economical job, we have found it necessary to operate our own laundry, laboratory and work-shops. The laboratory has not been in use in the past few years to any great extent but prior to that time, it was used constantly in the analysis of soaps, insecticides, cleaning compounds and many other materials.

In one series of tests in our laboratory, samples of sweepings from the various parts of the building were analyzed. Silica, in the form of sand and dust was found to predominate on the lower floors while carbon and grease were the cause of the major cleaning troubles on the upper floors of the building. This analysis enabled us to attack each problem with the right cleaning method.

There are so many pails on the market that it would seem there could be little cause for complaint on this score. We noticed, however, that constant moving of a pail over hard surfaces soon wore through the bottom ring and sooner or later a leak resulted. As the inside had, by this time, accumulated so much dirt and grease, it was often impossible to make a satisfactory repair. To overcome this trouble we now follow a standard practice of completely closing the inside seam with solder before the pail is put into service.

* Before National Sanitary Supply Assn., May 21, Cleveland, Ohio.

The question of selecting the most economical grade of textiles for cleaning purposes is one upon which opinions differ considerably. In our maintenance department, we use new bolt cheese-cloth almost exclusively. By folding 36" materials so as to form a yard square of four ply cloth, we build a so-called mop which has proved to be very efficient on large surfaces. After the material has served its purpose as a mop, it is laundered and ripped into yard square pieces for dust cloths. It is used for dusting, then relaundered, sprayed with paraffin oil and used for polishing woodwork. Finally, after another trip to the laundry, it is sent to the shops where it is used as wiping rags.

We selected cheese-cloth even though its initial cost was high as it was discovered to be more economical in the long run. When we tried misprints they were diverted for other purposes, reclaimed materials had lost some of their strength and were not of uniform size; tubular materials and blanket ends did not adapt themselves to our work. Efficient substitutes for sponges and chamois have not been found although there is a great need for them. As a result of the war, we are facing a shortage of French chamois. Sponges are hard to get as the last crop of Rock Island sponges was almost a total loss due to blight.

Tri-sodium phosphate, appearing in a score of combinations and in every color of the rainbow, has brought forth many different opinions as to its merit as a cleaner. The result of our own experience has been that if the solution is strong enough to affect the surface being cleaned, it will also affect the hands of the user. As janitors are not provided with rubber gloves, the safety of the surface is assured. After all, the removal of a

small amount of paint is no cause for alarm as tenants usually demand a change of color scheme before repainting is actually necessary. There is an abundance of good soap-powders and detergents on the market and anyone with a fair knowledge of the subject should have no trouble in making his selection. The increased use of linoleum and rubber tile has decreased the use of the heavier cleaners but has resulted in a flooding of the market with waxes of varying qualities.

Wash-rooms, due to the fact that they are regarded as only a source of expense, are often neglected. I am of the belief that the reputation of any building is affected sharply by the impressions made on the public which uses these rooms. In our building, despite the fact that it is in its fiftieth year of operation, high standards of cleanliness have been maintained by renovating from time to time. We have eliminated the use of deodorants by ample ventilation and by frequent cleaning. Hand dryers are used in place of towel service for the sake of cleanliness.

In determining policies of service and economy, we have made an effort to select sanitary products on a quality basis and have always made price a secondary consideration.

— ♦ —

Articles having a porous surface are polished by application of a layer of a liquid that leaves a hydrated silica deposit, and subsequent rubbing of the layer into the surface in the manner of French polishing. A suitable liquid is formed by causing an ester of silicic acid to react with water in the presence of a solvent for the ester that can carry water in solution or suspension, such as alcohol, acetone or toluene. Robert Easten and Noel Shaw. British Patent No. 506,771.

THIS IS THE PICTURE
THAT IS WORTH A
THOUSAND WORDS



to BUYERS OF ADVERTISING SPACE

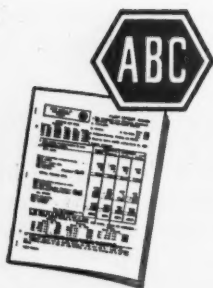
IF you buy advertising space today, you have one tremendous advantage over advertisers of twenty-five years ago.

Before 1914, men would have given an eye-tooth for the vital information on circulation which you can have for the asking—in A.B.C. reports. These reports give complete, authoritative facts to guide your buying and to make your advertising more effective.

A.B.C. reports reveal and analyze NET PAID CIRCULATION—the true measure of advertising value. A.B.C. reports answer these three vital questions about circulation: how much is there? where is it? how was it obtained? The answers give verified information on *quantity*, and an important index on *quality* of circulation.

Don't fail to make use of this great advantage. Before you buy space in this or any other publication, get the A.B.C. report. Study it. Determine how the circulation meets your requirements. Then buy with the knowledge that you are buying wisely and effectively.

Our circulation is fully audited in our latest A.B.C. report. We are proud of this report and will be glad to give you a copy



SOAP and Sanitary Chemicals **A.B.C.-A.B.P. Publication**

A.B.C. = Audit Bureau of Circulations = FACTS as a yardstick of advertising value

News.....

Award Construction Contract

White Tar Co. of New Jersey, Kearney, N. J., has just awarded a contract to Koppers Co., engineering and construction division, for the design and erection of modern naphthalene and disinfectant equipment to replace units damaged by fire on March 20. Construction has already been started and the new equipment is to be ready for operation by September 1.

Insecticide Act Enforcement

The Secretary of Agriculture has just issued an order directing that the enforcement of the Insecticide Act of 1910, effective June 30, 1940, is to be administered by the Agricultural Marketing Service of the Department of Agriculture. This order includes the transfer of the personnel now connected with the Insecticide Act enforcement work to the Agricultural Marketing Service. According to C. C. McDonnell, Chief of the Insecticide Division of the Department of Agriculture, Food and Drug Administration, the Agricultural Marketing Service was formed about a year ago through the consolidation of a number of the older units of the Department. C. W. Kitchen heads the Agricultural Marketing Service which is primarily a service and regulatory agency concerned with the various phases of marketing farm products. This includes the collection and dissemination of crop and livestock production and other agricultural statistics, the gathering and reporting of market information, standardization and inspection of farm products, research and demonstration in standardization and grading, and the administration of a number of federal regulatory laws.

Tri-Aid Takes New Quarters

Tri-Aid Chemical Products Co., sanitary chemicals, formerly at 230 Clyde St., Youngstown, Ohio, has

just moved to new and larger quarters at 729-731 Poland Ave.

Permit "Santox" Registration

Monsanto Chemical Co., St. Louis, may register the name "Santox," as a trademark for "chemical compounds employed as preventers of rancidity in soap and vegetable oils," it has been held by the United States Patent Office. Registration of the

mark had been opposed by Western Chemical Co., St. Joseph, Mo., on the grounds that the name would conflict with its mark, "Sanitox," for insecticides. However, the decision held the materials were completely different and there was no chance of confusing them.

Zonite Earnings Up

Zonite Products Corp., New Brunswick, and its subsidiaries report for the first quarter of 1940 a net profit of \$70,536 as compared with the profit of \$12,337 for the first quarter of 1939.

Ship Rat Infestations Reduced

The United States Public Health Service reports a big reduction in the rat population on ships entering American ports, as a result of the recent extermination efforts. Not only has the number of ships requiring fumigation at continental ports been reduced, but there has also been a reduction in total number of rats recovered from these ships. This reduction is credited to the intensive rat-destructive measures put into effect by the Public Health Service, according to C. L. Williams, assistant surgeon general in charge of the Foreign Quarantine division.

"The reduction is also due in part," he said, "to use of an accurate method of estimating the number of

rats on vessels by inspection. This latter development has permitted ship owners exemption from fumigation as long as their ships are maintained free of rats. This privilege they have availed themselves of by instituting active measures on ship board to eliminate rats through rat-proofing and rat-destruction."

Mr. Williams submitted the following comparison of rat infestation on ships arriving at U. S. ports in 1927 and 1939.

	1927	1939
Proportion of ships found rat infested	50%	20%
Number of rats per ship..	10.4	1.09
Number of rats per rat-infested ship	20.8	5.4
Number of ships requiring fumigation at continental U. S. ports.....	5,114	413
Rats recovered from ships	31,073	5,533

Crew from U. S. Quarantine Station at Rosebank, Staten Island, prepare for ship fumigating job.



Insecticide Stipulation

Wilson Bros. Paint and Hardware Co., Chicago, has entered into a stipulation with the Federal Trade Commission to discontinue advertising that its preparation, "Distol Concentrate," will kill bed bugs or bed bug eggs instantly. The company also agreed to stop representing that most bed bug mixtures scatter bed bugs into the walls or woodwork; that roaches are carriers of cancer; that "Distol Concentrate" is odorless; that its product, "Thymite," will eliminate roaches from all buildings overnight; that one application will keep any building clean of roaches, water bugs, silver bugs or ants for one year; and that there are no other insecticides which will achieve the same results as will "Distol Concentrate" or "Thymite."

To Control Pyrethrum Trade

Pyrethrum shipments from Japan are now under semi-official government control through the agency of the Farm Products Export Company authorized by the Japanese Diet at its recent session. The law provides that the company has the right to order holders of excess supplies to sell their holdings to the export company which will take over control of distribution to exporters. It is reported that steps are being taken to make sure that these exporters do not send an abnormally large percentage of their shipments to the yen-bloc area.

Tell Story of Floor Sweep

The story of one of the first sweeping compounds to be introduced in the American market. — "Neverdust," a product of Jno. C. F. Snyder, Philadelphia, is told in a recent issue of *Oilways*, house magazine of the Standard Oil Company of New Jersey. Mr. Snyder put his first floor sweep on the market in 1911 and one of his early customers was the *Loganburg Bugle*. Today the Snyder plant in Philadelphia operates as Jno. C. F. Snyder & Sons, with three sons of the founder, John, Fred and Donald, conducting the business. The line includes three other floor sweeps besides

the original "Neverdust," called "San-O-Dust," "Blue Label" and "S. B." The company sells about two and a half million pounds of these products each year, they report.

G. F. Leonard in New Post

George F. Leonard, former sales manager for Tobacco By-Products and Chemical Corp., Louisville, Ky., manufacturers of nicotine insecticides, has been promoted to the position of vice president in charge of sales.

Cite Agri. Insecticide Mfrs.

Illegal price control in the sale of insecticides, fungicides and related items, has been charged in a complaint issued by the Federal Trade Commission against the Agricultural Insecticide & Fungicide Association, New York, its officers, directors and members, and against five cooperating corporations: Allegheny Chemical Corp., Reading, Pa.; Ansbacher-Siegle Corp., Brooklyn; General Chemical Co.; Phelps-Dodge Refining Corp.; and Tennessee Corp., all of New York.

It is alleged that about October 1, 1936, the association members entered into an arrangement among themselves to restrain competition in the sale of their products by maintaining uniform prices, terms and discounts. It is also charged that the association distributed to cooperating companies lists of dealers to be recognized as retail dealers to the exclusion of other dealers, and maintained an open price filing system under which it relayed advance notice of price changes to members. The results of these activities, says the F.T.C., have been the suppression of competition in the interstate sale of the products in question, and a tendency to create a monopoly.

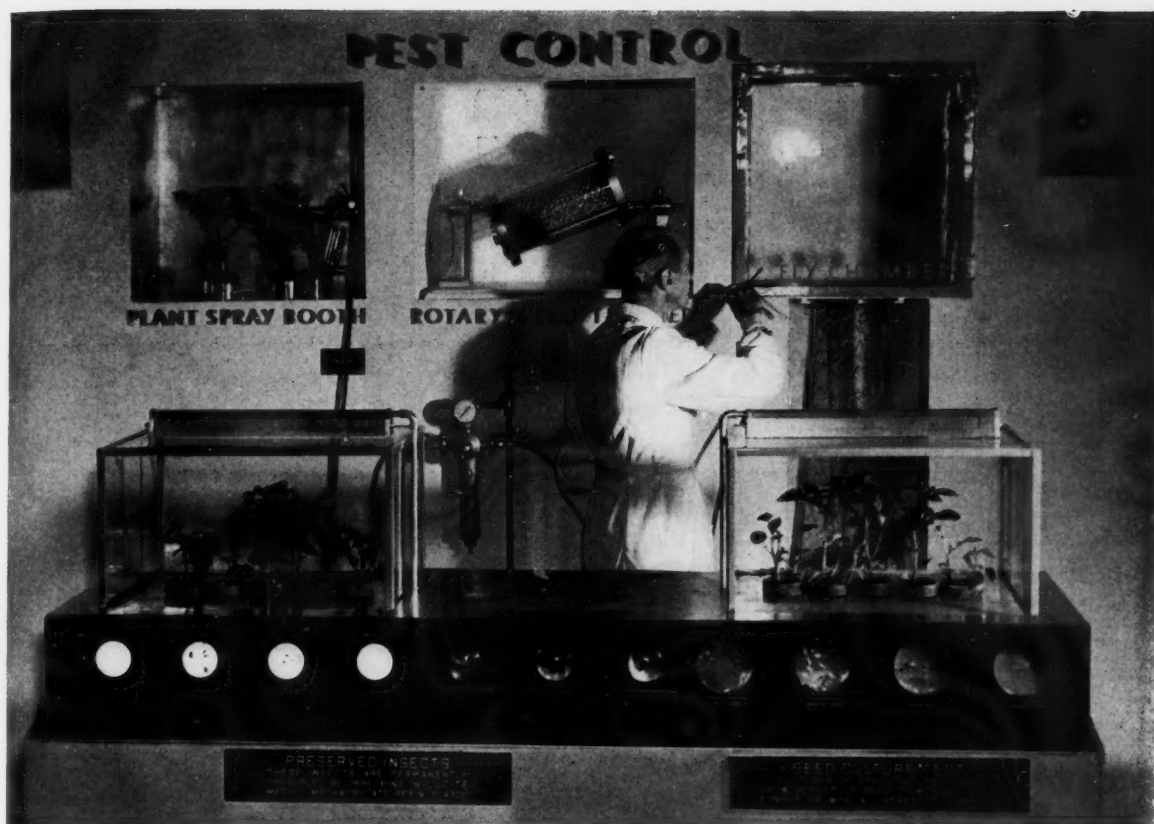
The officers of the association are: R. N. Chipman, Portland, Ore., chairman of the board of directors; and L. S. Hitchner, president and treasurer; and June C. Heitzman, secretary, both of New York. Members of the board of directors of the association are: R. N. Chipman; H. D.

Phosphorus for Roaches

A paste containing 2 per cent of phosphorus diluted with syrup was used in tests on cockroaches. The median lethal dose for the American cockroach was found to be 0.02 mg. of phosphorus per gram of body weight. Phosphorus was much more toxic than either sodium arsenite or sodium fluoride in syrup. Phosphorus was imbibed more rapidly. Sodium arsenite was more toxic in water than in syrup but even in water it was less toxic than phosphorus. F. L. Campbell. *Pests* 8, No. 4, 12 (1940).

Whittlesey, Cleveland; H. P. Mansfield, Wilmington, Del.; J. B. Cary, Middleport, N. Y.; J. H. Boyd, Memphis; A. J. Flebut, Richmond, Cal.; G. F. Leonard, Louisville; and R. E. Demmon, G. E. Riches, and L. S. Hitchner, New York.

The twenty-six association member companies, named in the complaint as representative of the entire membership, are: Acme White Lead & Color Works, Detroit; American Agricultural Chemical Co., American Cyanamid & Chemical Corp., George W. Cole & Co., Derris, Inc., John Powell & Co., and Stauffer Chemical Co., all of New York; American Nicotine Co., Henderson, Ky.; Antiseptic Products Co., Denver; California Spray-Chemical Corp., Richmond, Cal.; Chipman Chemical Co., Bound Brook, N. J.; Hercules Glue Co., Ltd., trading as Colloidal Products Corp., San Francisco; Commercial Chemical Co., Memphis; Dow Chemical Co., Midland, Mich.; E. I. du Pont de Nemours & Co., Wilmington, Del.; Latimer-Goodwin Chemical Co., Grand Junction, Colo.; F. L. Lavanburg Co., Brooklyn; Lucas Kil-Tone Co., Philadelphia; Niagara Sprayer & Chemical Co., Middleport, N. Y.; Nicotine Production Corp., Clarks-ville, Tenn.; Sherwin-Williams Co., Cleveland; Southern Acid & Sulphur Co., St. Louis; Taylor Chemical Works, Ltd., Aberdeen, N. C.; Tobacco By-Products & Chemical Corp., Louisville; J. W. Woolfolk Co., Fort Valley, Ga., and Pittsburgh Plate Glass Co., Corona Chemical division, Milwaukee.



Du Pont Fair Exhibit

For the second year, the Du Pont Pest Control Exhibit at the World's Fair is attracting wide attention to the scientific control of insects, both household and agricultural. The insect control exhibit is a part of the "Wonder World of Chemistry" in the Du Pont Building and is in charge of Dr. M. D. Leonard, well-known entomologist, assisted by William Van Gelder, specialist in plant pathology and entomology. The photo shows Dr. Leonard demonstrating the Du Pont synthetic insecticide ingredient, IN-930, against house flies. Supplies of Mexican beetles, Jap beetles, potato beetles, and house flies are maintained in the "insect zoo" for demonstrations. More than five million persons visited the Du Pont insecticide exhibit last year.

Insecticide Stipulation

The Federal Trade Commission has accepted a stipulation from Rose Mfg. Co., Philadelphia, that it will cease representing that its spray,

"Tri-Ogen," for plants and flowers, will kill or repel all insects generally, that it will give complete plant protection against all fungus diseases, or that use of the spray will make a plant immune from attack by all insects and diseases. Rose Mfg. Co. further agreed to cease advertising that the spray is the most successful and revolutionary discovery ever made in the history of rose culture, or that it is the first definite mildew and black-spot control combined with an insecticide.

Cite Zonite Corp.

Zonite Products Corp., New Brunswick, N. J., has been ordered by the Federal Trade Commission to cease and desist from certain misleading representations concerning the products of its competitors. In the sale of a moth-repellent, "Larvex," the Commission charges, the Zonite company advertised as follows:

"If you, too, want sure protection against moth damage, don't take chances with moth-balls, chests, and other make-shift ways. Too much is

at stake. It is not enough to try with insecticides, bug-killers, moth balls, cedar chests, and tarbags with obnoxious odors, to drive away or kill the flying moth. When you see the flying moth it is too late—she has already laid eggs in your woolen things—and old-fashioned methods don't baffle the hungry moth-worms which hatch from the eggs."

By means of these representations, the Commission finds, Zonite Products Corp. disparaged its competitors and their products, which when properly used, will protect fabrics against moth damage. The company is ordered to stop representing that moth balls, cedar oil, tar and other products containing pyrethrum, naphthalene or paradichlorobenzene will not protect fabrics and garments from damage by moths or larvae.

Appoints Advertising Counsel

William A. Reed Co., Philadelphia, manufacturer of "Medrex" ointment and "Medrex" soap, has appointed J. M. Korn Co. as advertising counsel.

Oxford English Kaolin

• Finest and whitest English China Clay—Big stock carried in Chicago warehouse. Write for low prices!

Triple 000 Multi-cell

• Air-floated, diatomaceous earth—finest grade—free from grit or impurities. We'll quote prices that are right!

SILICAS and Silica Sand

• Amorphous, crypto crystalline and crystalline. Water ground, water floated, and air floated grades. *Special grinds for metal polish use to replace imported silicas.* SAVE MONEY—Send us your specifications.

TAMMS SILICA CO

**228 N LA SALLE ST.
CHICAGO, ILLINOIS**

CARNAUBA WAX

Choice Selections

The maintenance of our own organization in Brazil places us in a unique position as importers of this product.

**ALL GRADES
SPOT OR FUTURES**

LENAPE TRADING CO., INC.
225 BROADWAY NEW YORK

Sales Representatives

BOSTON, MASS.
N. S. Wilson & Sons Co.
729 North Station
Industrial Bldg.

CHICAGO
Arthur C. Trask Co.
4103 So. La Salle St.

SYRACUSE, N. Y.
L. R. Cross
418 Solar St.

ST. LOUIS, MO.
Clifford L. Ions Co.
619 Clark Ave.

PHILADELPHIA
R. Peltz Co.
36 Kenilworth St.

TETRA SODIUM PYRO PHOSPHATE

Crystalline-Anhydrous

**Alkalies
Paradichlor benzene
Carbon Tetrachloride
Tri Sodium Phosphate**

We are in a favorable position to work with you on your requirements for these and other chemicals used in the manufacture of soaps, detergents and sanitary products. Why not check with us?

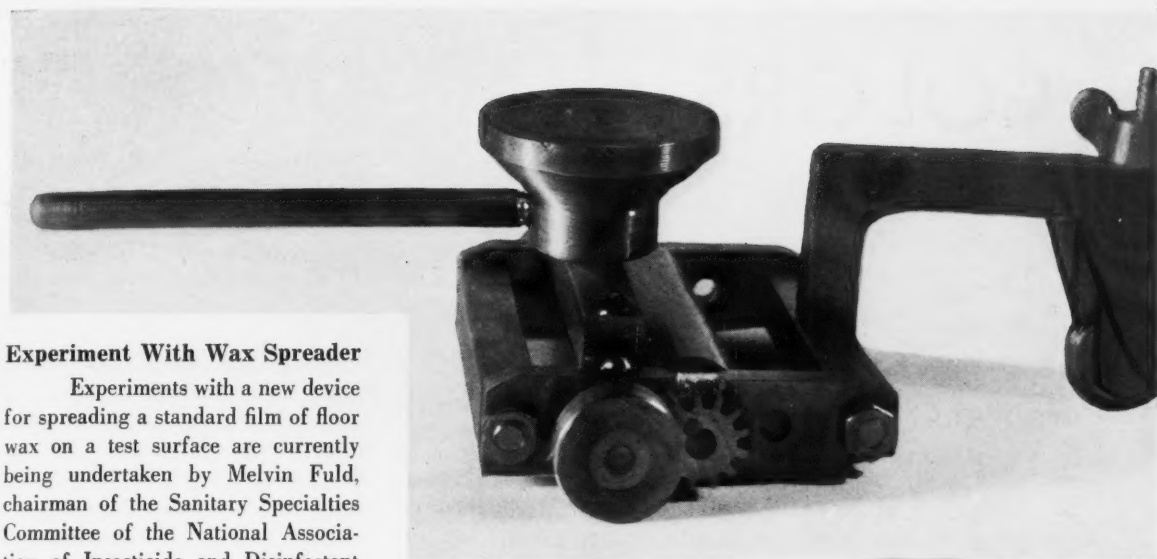
JOHN A. CHEW, INC.
60 East 42nd Street New York
Phone: MUrray Hill 2-0993

Classified Advertising

Brings excellent results at a minimum cost. Rates are only 10c per word with a minimum charge of \$2 per issue (position wanted advertisements accepted at half rates).

Whether you have some surplus equipment or material for sale, have a position open or are looking for a new connection, etc., use space in the Classified Section of *Soap & Sanitary*

★★★ *Chemicals.* It will place you in touch with the entire soap and sanitary products industry.



Experiment With Wax Spreader

Experiments with a new device for spreading a standard film of floor wax on a test surface are currently being undertaken by Melvin Fuld, chairman of the Sanitary Specialties Committee of the National Association of Insecticide and Disinfectant Manufacturers. The apparatus, illustrated above, includes a spreading roller, moved by a driving roller, both of which are mounted on a carriage which moves over the test surface on wheels. Across the driving center is a rod holding a base support on which weights of various sizes may be placed. These being over the driving force, the front control is not affected. The spreading roll is $\frac{3}{4}$ " in diameter by $2\frac{1}{2}$ " long. The carriage, in the model illustrated, is $2\frac{1}{2}$ " long by $2\frac{15}{16}$ " deep. The results of tests with this new applicator will be presented at the December meeting of the association.

Plan Cyanide Fumigant Study

Trustees of the University of Illinois have approved an agreement with American Cyanamid & Chemical Corp., which provides for a cooperative investigation of "Cyanogas" fumigation of greenhouses. The studies will be made by the Illinois Agricultural Experiment Station and the State Natural History Survey.

Canadian Polish Production Up

The total value of polishes, floor waxes, and similar preparations manufactured in Canada in 1938 was \$3,096,253, according to an annual report recently issued by the Dominion Bureau of Statistics of Canada. The 1937 figure for Canada was \$2,736,269. In 1938 there were 52 es-

tablishments manufacturing this type of product. Individual products were: paste floor wax, 4,441,142 pounds valued at \$906,964; liquid floor wax and polish, 348,985 gallons valued at \$590,602; furniture polishes, \$150,526 and automobile polishes valued at \$56,422. The industry employed 498 workers with a total capital amounting to \$2,485,993.

Continental Salesmen Meet

The annual sales conference of Continental Can Co. was held recently at the Greenbrier Hotel, White Sulphur Springs, West Virginia. Over 150 local and divisional sales managers from Continental's fifty offices and plants throughout the United States and Canada attended the four-day meeting.

Deodorant Stipulation

C. E. Woodling, trading as C. E. Woodling Chemical Works, Allentown, Pa., selling "Odorene," to be sprayed in rooms for deodorizing them, has agreed with the Federal Trade Commission to stop making certain claims in selling the product. Mr. Woodling has agreed to cease representing that the product is instant in action and will kill odors, or implying that it is permanent in effect, that the financial opportunities afforded in selling the product are unparalleled, and that the product is effective for all odors.

Bring Out Gum Solvent

The development laboratory of Curran Corp., Somerville, Mass., have recently brought out a new cold tank stripping solvent. It is said that the solvent will quickly strip the carbonaceous and tarry deposits, or "piston varnish," from aircraft engine pistons, connecting rods and the like without harmful effect on the aluminum or magnesium metals. The solvent can be made from low-cost diluents and "Gunk Concentrate," manufactured by Curran Corp.

Mantrose Enlarges Plant

Mantrose Corp., importer and bleacher of shellac, Brooklyn, has just completed the construction of a refrigeration plant and low-temperature packing plant in a new building adjoining its factory. The refrigeration equipment was manufactured and installed by York Ice Machinery Corp., York, Pa. Further additions to the Mantrose plant are in progress.

Emulsifiers and Bug Removers

Two new products coming from the laboratories of E. I. du Pont de Nemours & Co. are: "Dis-solve", a concentrated grease emulsifier, and "du Pont Bug Remover", a powder in a shaker-top container for removing old and new "bug deposits" from automobile windshields and bodies.

COLORS

for

Toilet Soaps Shampoos
Liquid Soaps Lotions
Para Blocks Hand Soaps
Shave Creams Sweep Compounds
and other Chemical Specialties

* * * *

Does your product require a *certified color* under the new law? Let us advise you, and supply you with exactly the right color for the right purpose!

Interstate Color Co., Inc.
9 Beekman Street New York

"Color it for greater sales appeal."



DO YOU WANT TO ADD MOISTURE TO CHIPS OR GRANULES?

The Sprout-Waldron style "J" mixing conveyor is being used by leading soap manufacturers for this service because it distributes the moisture evenly and handles the product continuously with minimum breakage or deterioration. For full information, without obligation, write today to

SPROUT, WALDRON & CO., INC.

132 SHERMAN STREET . . . MUNCY, PA.

MIXING, CONVEYING. POWER TRANSMISSION MACHINERY

HOOKER

Chemicals for Manufacturers
of Soaps, Insecticides and
Sanitary Chemicals

Highest uniformity and adherence to specifications are guarded by Hooker research laboratories and laboratory-controlled production methods. Among the many Hooker Chemicals:

Paradichlorobenzene
(PARADI)
Reg. Trade Mark
Orthodichlorobenzene
Cycle Hexanol
Methyl Cycle Hexanol
Caustic Soda
Bleaching Powder

Hooker technical field service is available for consultation and cooperation with your own chemists.



HOOKER ELECTROCHEMICAL COMPANY
NIAGARA FALLS, NEW YORK
NEW YORK CITY TACOMA, WASHINGTON

We're ready for the rush! . . . are you?

We're all stocked and staffed to take care of the busy summer season. Bobrick customers know that the hot weather means boom-time in the liquid soap department.

Better take inventory of your dispenser stock NOW. Then dig out your Bobrick catalogue and rush us your order. If some salesman has swiped your handy Bobrick folder, send us an SOS quickly and we'll shoot you a new one by return mail.

Bobrick Manufacturing Corporation

15 East 26th Street

New York, N. Y.

Est. 1906

Janitors Receive Advice

"Don't pay too much attention to trade names in the selection of custodial supplies," advised Dr. H. H. Linn, in an address before a group of janitors assembled at Teachers College, Columbia University, New York, for a five-day course for school building service employees, held June 24 to 28. While the selection of sanitary supplies is not a complicated problem, said Dr. Linn, the custodian of a school building should be guided by a knowledge of the materials he must buy rather than by the claims of advertisers who are often prone to exaggerate.

Discussing penetrating floor seals, he reported on recent tests in which two different products were used on two gymnasium floors of approximately the same size. It took thirty-three gallons of one seal to finish the floor of one gymnasium while only thirteen gallons were required for the other floor. The per cent solid matter varies so widely, he indicated, that for a substantial buyer it would probably pay to make tests to measure this important property. Floor seals may be purchased economically in concentrated form and then cut down to the correct concentration for use by thinning with petroleum naphtha, he advised. It will also be found that in choosing a seal for a gymnasium it pays to buy a seal made for that purpose instead of being guided by price alone and buying a cheaper product, he said.

A good dustless floor oil can be made quite inexpensively by mixing three parts of deodorized water white kerosene with one part of pale paraffin oil. Mr. Linn told his listeners. Cedar oil or other odors can be added if desired. In this way a mop or duster spray can be made at a cost of about 12½ cents a gallon. In a similar way, floor dressing can be made by mixing one part of kerosene with three parts of paraffin oil. This mixture is not a high class product but it is a satisfactory floor dressing and can be used as a furniture polish.

Scrubbing compound can be made, the janitors were told, by mix-

ing forty pounds of jelly oil soap with twenty pounds of tri-sodium phosphate in fifty gallons of water.

Test Insecticide Repellency

A series of repellent walk tests developed by Whitmire and Denny of Whitmire Research Corp., St. Louis, has demonstrated the effectiveness of this method in checking the toxic and repellent values of contact insecticide sprays. The test is conducted by painting 125 mg. of spray on 8.75 square inches around the top of the arc of a circular screen roach cage. The base of the cage is a funnel which extends into the observation cage. Flies affected with leg paralysis to the extent that they are unable to fly or walk, fall through the small opening at the bottom of the funnel into the observation cage where they have access to food and water. The funnel opening can be kept closed by a cork stopper in order to record percentage knock-down at definite time intervals.

In the tests recorded by Whitmire Research Corp., the livestock spray used was a 10 per cent solution of a mixture of tephrosin, deguelin,

sumatrol, toxicarol and other highly toxic unidentified substances extracted from derris resins. The cage was painted one hour before the flies were introduced and the following average results were recorded: after 10 minutes, 36 per cent were down; after 30 minutes, 74 per cent were down; at one hour, 98 per cent were down; and at the end of 24 hours, 99 per cent were dead.

I. & D. Convention Registrants

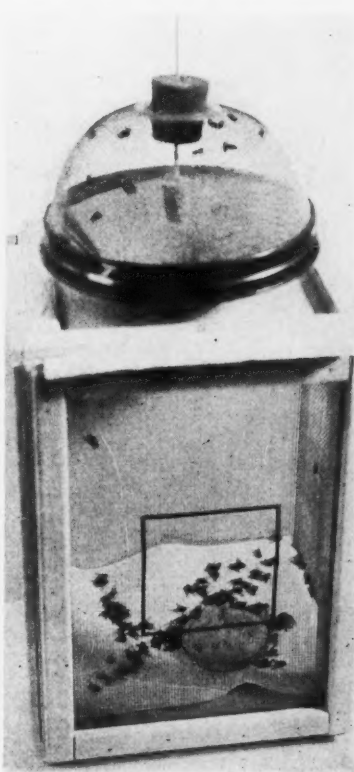
(From Page 95)

Thomas, Wallace—Gulf Oil Corp.
Thompson, Friar M., Jr.—Hercules Powder Co.
Thomssen, E. G.—J. R. Watkins Co.
Tildsley, J. L., Jr.—Reilly Tar & Chemicals Corp.
Trevisan, Louis A.—American Can Co.
Torpin, Paul D.—McLaughlin Gormley King Co.
Trusler, R. B.—Davies Young Soap Co.
Van Ameringen, A. L.—Van Ameringen-Haebler, Inc.
Vance, Martin B.—Givaudan-Delawanna, Inc.
Varley, J. C.—Baird & McGuire, Inc.
Weed, Alfred—John Powell & Co.
Weed, Wm. J.—Niagara Alkali Co.
Weirich, Clarence L.—C. B. Dolge Co.
Whitmire, H. E.—Whitmire Research Corp.
Wilkin, Gilbert—Auto Compressor Co.
Wilson, Roger—Continental Can Co.
Wolff, Frederick W.—E. I. du Pont
Wotherspoon, R.—Derris, Inc.
Yates, Richard T.—Hercules Powder Co.
Yeazel, F. C.—Reilly Tar & Chemical Corp.
Young, R. H.—Davies Young Soap Co.
Zick, W. J.—Stanco, Inc.

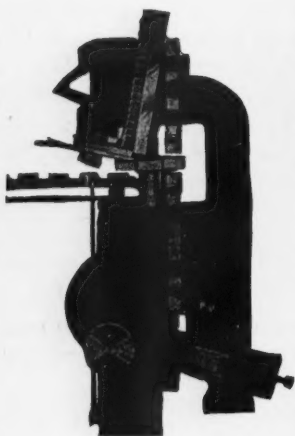
Guests

Barnhart, C. S.—Ohio State University
Campbell, Dr. F. L.—Ohio State University
Davies, W. W.—United Air Lines
Davis, J. J.—Purdue University
Eagleson, Dr. Craig—USDA, Dallas, Texas
Fuller, Henry C.—NAIDM
McCauley, W. E.—State Natural History Survey
McGovran, E. R.—USDA, Beltsville, Md.
Payne, Geo. C.—Bur. Foreign and Domestic Commerce
Roark, Dr. R. C.—USDA, Washington-D. C.
Ulvin, Dr. Gus B.—Sidney Wanzer & Sons
Weinman, Carl J.—State Natural History Survey

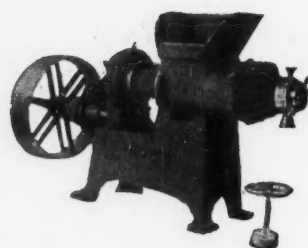
Repellent Walk Test Chamber



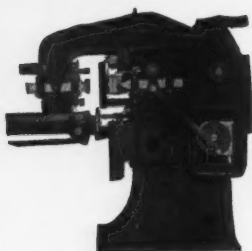
Special Offerings of SOAP MACHINERY Completely Rebuilt!



H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

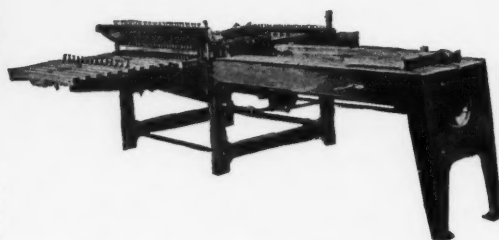


Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.

4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.



2 Automatic Power Soap Cutting Tables.

INVESTIGATE THESE SPECIAL BARGAINS

Johnson Automatic Soap Chip Filling, Weighing and Sealing Machines for 2 lb. and 5 lb. Packages guaranteed in perfect condition.

ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.

Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.

Ralston Automatic Soap Presses.

Scouring Soap Presses.

Empire State, Dopp & Crosby Foot Presses.

2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.

H-A 4 and 5 roll Steel Mills.

H-A Automatic and Hand-Power slabs.

Proctor & Schwartz Bar Soap Dryers.

Blanchard No. 10-A and No. 14 Soap Powder Mills.

J. H. Day Jaw Soap Crusher.

H-A 6, 8 and 10 inch Single Screw Plodders.

Allbright-Nell 10 inch Plodders.

Filling and Weighing Machine for Flakes, Powders, etc.

Steel Soap frames, all sizes.

Steam Jacketed Soap Remelters.

Automatic Soap Wrapping Machines.

Glycerin Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.

Day Grinding and Sifting Machinery. Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Proctor & Schwartz large roll Soap Chip Dryers complete.

Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.

Day Talcum Powder Mixers.

All types and sizes—Tanks and Kettles. Ralston and H-A Automatic Cutting Tables.

Soap Dies for Foot and Automatic Presses.

Broughton Soap Powder Mixers.

Williams Crutcher and Pulverizer.

National Filling and Weighing Machines.

Send us a list of your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY

1051 WEST 35th STREET, CHICAGO

Phone Yards 3663-3666

Our Forty Years Soap Experience Can Help Solve Your Problems

Classified Advertising

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Wax Emulsion Specialist—Six years experience research and manufacturing water waxes, liquid soaps, insecticides, seals, disinfectants and cleaning compounds. Address Box No. 841, care *Soap*.

Soap Maker and Chemist with long experience in the manufacture of all kinds and grades of soaps and soap products. Address Box No. 856, care *Soap*.

Sales Representative: Man with following on Pacific Coast desires to represent manufacturer of fine and medicinal chemicals in that territory. For further details communicate with Box No. 848, care *Soap*.

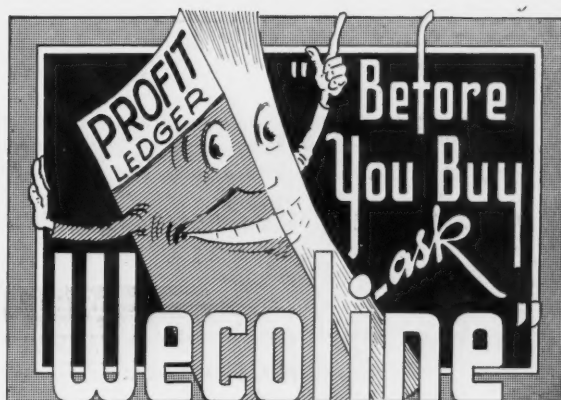
Insecticide Man—Man with a number of years experience in the marketing and advertising of household insecticides desires new connection in the insecticide industry in charge of sales of this and kindred products. For further details, write to Box No. 831, care *Soap*.

Sales Manager; many years experience in janitor and sanitary supply field. Now employed. Qualified to manage present sales organization or to start new sales division for manufacturer or distributor. Address Box No. 849, care *Soap*.

Chemist: Man with practical laboratory background in drugs, soaps, cosmetics, desires position in laboratory or plant of manufacturing. 28 years of age; graduate of chemistry from recognized university. For further details communicate with Box No. 834, care *Soap*.

Insecticides and Chemicals—Young man with two years experience selling agricultural insecticides, chemicals, etc., for large manufacturer desires new position in sales capacity. 26 years old, college graduate in chemistry. For further details address Box No. 832, care *Soap*.

Soapmaker and Chemist, 20 years experience in the manufacture of all types of soaps, mottled soaps, disinfectants and janitor supplies, seeks new connection. Address Box 812, care *Soap*.



It will be to your profit to "ASK WECOLINE" before you buy

DISTILLED FATTY ACIDS

Exceptionally Pure and White

COCONUT . . . PALM . . . CORN . . . TEASEED . . . SOY BEAN . . . COTTONSEED . . . LINSEED . . . WHITE OLEIC . . . STEARIC . . . LAURIC . . . CAPRIC . . . are Wecoline specialties.

Confidence will grow as you re-order . . . each shipment will be convincing evidence that Wecoline is a dependable and unique processor and refiner.

Specifications and Samples mailed on request. Also we invite inquiries for Special Process Fatty Acids.

WECOLINE Products, Inc. BOONTON, N.J.
Sales Offices: NEW YORK . . . CHICAGO . . . BOSTON

BE PREPARED WITH "CONSOLIDATED"

Guaranteed Reconditioned

EQUIPMENT

Save TIME and MONEY with these
GUARANTEED values.

SELECTED SPECIALS

- 1—Sargent 54" x 72" single Chilling Roll.
- 2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single cooling roll.
- 2—Jones Vertical Automatic Soap Presses.
- 1—Jones Horizontal Automatic Soap Press.
- 3—Houchin Plodders, 10", 8".
- 2—Pneumatic Scale Carton Packaging Units.
- 2—Automatic Soap Wrapping Machines.

Crutchers
Soap Kettles
Powder Mixers
Granite Mills
Plodders
Slobbers

Foot and Automatic
Soap Presses
Cutting Tables
Pulverizers
Soap Pumps
Soap Chippers

Fillet Presses
Soap Frames
Powder Fillers
Labellers
Tanks
Boilers

Send for New Illustrated Circular

CONSOLIDATED PRODUCTS CO., INC.
15-21 PARK ROW NEW YORK, N. Y.
BArcley 7-0600 Cable Address: Equipment
We buy your idle Machinery—Send us a list.

SOCONY-VACUUM

NAPHTHENIC ACIDS

- CRUDE, SEMI-REFINED AND FULLY REFINED GRADES AVAILABLE IN VARIOUS ACID NUMBER RANGES

SOCONY-VACUUM OIL COMPANY, INC.

26 Broadway, New York

GENERAL PETROLEUM CORPORATION

108 W. 2nd St., Los Angeles, Calif.

A New Departure In Crutcher Performance

The HUBER ELECTRO PERFECTION CRUTCHER is now available in a new model,—with four forward and reverse speeds. The flexibility in operating technique afforded by this wider choice of crutcher speeds should be decidedly interesting to many soap makers. Available in three sizes,—1,500, 2400 and 3200 pounds.



HUBER MACHINE CO.

"Builders of Good Soap Machinery for the Past 45 Years"
265 46th STREET BROOKLYN, N. Y.

FOUGERE SAVON SUPREME

A FINE PERFUME OIL FOR SOAPS
AND ALL SOAP PRODUCTS

FOUGERE SAVON SUPREME

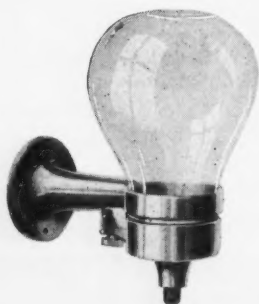


*We shall be pleased to
forward a sample
and full information*

COMPAGNIE PARENTO, Inc.

Croton-on-Hudson

New York



HOCKWALD'S DISPENSERS

No. 1N Wall Type

No. 2N Basin Type

All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

WRITE FOR DESCRIPTIVE LITERATURE AND PRICES

Hockwald Chemical Company

135 Mississippi Street
San Francisco, Cal.

LARGEST PACIFIC COAST MFR. OF POTASH SOAPS AND SANITARY PRODUCTS

Chief Chemist for large specialty concern desires change or establish new concern. Possess excellent formulae and others developed from research. Address Box No. 851, care *Soap*.

Chemist, Ph.D.; many years practical experience in soaps, oils, fats, cosmetics, textile chemicals, etc., desires suitable connection. Address Box No. 796, care *Soap*.

Chemist—with several years experience as chief chemist of large soap and glycerine manufacturers desires superintendency of medium-sized plant. Address Box No. 794, care *Soap*.

Positions Open

Representatives Wanted: Manufacturer of chemical specialties has opening for clean cut, aggressive salesmen. Applicants must be able to show clean selling record for number of years and be in position to travel. Gentiles only under 40, liberal commissions and bonus. In reply state experience and background. Address Box No. 854, care *Soap*.

Wanted—Soap Superintendent: Man with several years practical experience, capable of operating soap plant manufacturing textile and laundry soaps, is needed by well-known soap manufacturer. Give experience, education and where employed during past five years. Address Box No. 830, care *Soap*.

Wanted: Janitor supply man with good background and sales record who could manage janitor supply department wanted by large soap manufacturer. Give full details and education, experience, etc. Address Box No. 803, care *Soap*.

Soap Executive Wanted: Man wanted for responsible position with large organization. He must have a close knowledge of the commercial side of soap manufacture, selling, etc., and must have had experience with one or two well-known soap companies. The man should be not under 35 or over 50. Preferably he should have a college background and considerable executive experience. Details may be sent in complete confidence to Box No. 859, care *Soap*.

Miscellaneous

Wanted: Bids 1200 gals. bulk no-rubbing wax. Fed Specification No. 122, quart sample—references. Closing date Aug. 15, 1940. Address Box No. 858, care *Soap*.

Olive Oil Olive Oil Foots

Deliveries spot and future in barrels, tank cars, drums or tank wagons.

ESSENTIAL OILS

Lemon—Bergamot—Orange

LEGHORN TRADING CO.
INC.

21 West St., New York

Phone: WHitehall 3-9636-7-8

ITALY—SPAIN—GREECE—TURKEY—AFRICA

Mr. Jobber:

HERE IS YOUR COMPLETE LINE OF

COLE-SPEED

CHEMICAL COMPOUNDS AND SANITARY CHEMICALS



WRITE FOR COMPLETE CATALOGUE AND PRICES.

INSECTICIDES	POLISHES
DISINFECTANTS	SOAPS
DEODORANTS	WAXES
INDUSTRIAL	OILS
CHEMICALS	ETC.

For the trade only; in bulk or small packages under private brand.

COLE CHEMICAL CORP.

Long Island City

New York

SOAP DIES and MOULDS

—for—
TOILET SOAPS
LAUNDRY SOAPS AND
BATH TABLET
STAMPING

For Foot and Power Presses

Established 1894

ANTHONY J. FRIES & SON CO.

717 Sycamore Street

Cincinnati, O., U. S. A.

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send
for testing samples.*

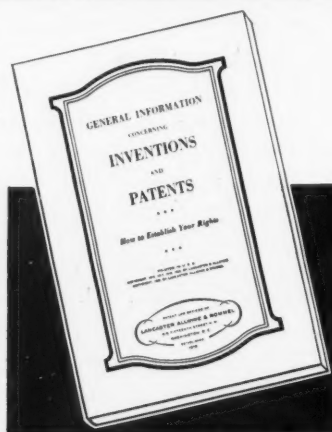
PYLAM PRODUCTS CO., INC.

Manufacturing Chemists, Importers, Exporters

799 Greenwich St.

New York City

Cable Address: "Pylamco"



Send for a copy—it's free

Interesting booklet concerning Inventions, Patents, Trade-Marks and Copyrights, together with Schedule of Government and Attorney's fees, sent free on request. Simply ask for "booklet and fee schedule." No charges are made for preliminary advice, either in connection with patent, trade-mark or copyright cases.

Lancaster, Allwine & Rommel

Registered Patent and Trade-Mark Attorneys

402 BOWEN BLDG.

WASHINGTON, D. C.

TESTED DISINFECTANTS

Guaranteed phenol coefficients

Coal Tar, Coefs 2 to 20
Pine Oil, Coefs 3 and 4
Cresylic, Coef. 2.5 plus

Every batch is tested bacteriologically by F. & D. A. methods by a well known commercial laboratory (name on request).

"GOOD" PRODUCTS

at

"GOOD" PRICES

MANUFACTURED BY US UNDER CAREFUL
LABORATORY CONTROL

POTASH SOAPS

Guaranteed soap content
Uniform consistency
Controlled alkalinity

Liquid Soaps (up to 40%)
Vegetable Oil Soaps
Pine Scrub Soaps (Liquid and Jelly)
Sassafrassy Scrub Soap
Potash Oil Auto Soap
U. S. P. Green Soap

JAMES GOOD, Inc.

Manufacturing Chemists Since 1868

2112 E. Susquehanna Avenue

PHILADELPHIA, PA.

Wanted: Soap chip dryer, Proctor & Schwartz preferable. Blanchard No. 10A soap powder mill or similar type. Address Box No. 857, care *Soap*.

Factories Started—remodeled. Instruction in laundry and toilet soap processes and preparations; perfumes; glycerine recovery. Address English or Spanish, Box No. 853, care *Soap*.

Business For Sale: \$40,000 will buy thriving, well-established Chemical Company located in Philadelphia. Business for sale to settle an estate. Products: Liquid Soaps, Insecticides, Disinfectants, Fire Extinguishing Liquid, etc. Present management completely competent to run business. Excellent opportunities for expansion. Box No. 852, care *Soap*.

Wanted for User: Soap chip dryer; filter press; foot and automatic soap press; crutcher; plodder; milling roll; dry powder mixers. What have you? Address Box No. 855, care *Soap*.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Rebuilt Soap Machinery: Jones automatic soap press; foot presses; Proctor soap dryer; Lehmann 3 roll inclined water cooled steel roller mill; 4 roll stone mill; Johnson carton sealers; automatic powder fillers; crutchers; plodder; 6 knife chipper; cutting table; frames; filter presses; mixers; boiling kettles; etc. Send for Liquidation Bulletin No. 402. Stein Equipment Corp., 426 Broome Street, New York City.

Electrolytic Anodes—for hydrogen cells recoated with Nickel by specialists—Anodes furnished! Philadelphia Rust-Proof Co., 3225 Frankford Ave., Philadelphia, Pa.

Moth Larvae and Carpet Beetles for sale. Nationally-known laboratory raising its own moth larvae and carpet beetles for experimental purposes can supply same to other laboratories in desired quantities at a very favorable price. Address Box No. 850, care *Soap*.

For Sale: 125-H.A. 1200 lb. Soap Frames; Garigue Glycerine Evaporator, 225 lb. per hour; Proctor 3 section Soap Chip Dryer with 36" dia. roll; H.A. 22" Soap Chipper; Jones Automatic Soap Press; Pumps, Kettles, etc. Send for complete lists. BRILL EQUIPMENT CORPORATION, 183 Varick Street, New York, N. Y.

Valencia Pumice

Reg. U.S. Pat. Off.

an

AMERICAN PRODUCT

Similar to Italian Pumice
In physical and chemical properties.

Write for samples and 12 page booklet
of information

**BARNSDALL TRIPOLI CORPORATION
PUMICE DIVISION**

(Subsidiary Barnsdall Oil Co.)

SENECA, MISSOURI, U. S. A.

20 MINUTE DRYING FLOOR FINISH is 20th Century Speed



When we put STA-BRITE Self-Polishing Floor Finish on the market, we realized that it would have to be the best that fine material, modern machinery and skilled craftsmen could produce. We knew that, besides manufacturing a floor finish that gave a beautiful lustre, was water-resistant, had heavy-duty durability and non-slip properties, we had to offer more. And we did—namely, 20 minute drying. Today, the great satisfaction of numerous users certainly proves the vast superiority of STA-BRITE.

Send for generous sample of STA-BRITE—and, at the same time, ask for sample of PINE-GLO Neutral Cleanser, our heavy-bodied liquid scrubbing soap that expertly cleans all surfaces safely, speedily and powerfully! Write for new catalog tool!

Fill in and Mail Coupon Now!

SUPERIOR SOAP CORPORATION

121 Nostrand Avenue • • Brooklyn, N. Y.

Rush sample(s) of ☐ STA-BRITE ☐ PINE-GLO to me. S-6-40

Send me your new Catalog ☐

Name

Address

NEVILLE TAR ACID OILS

for Better Disinfectants

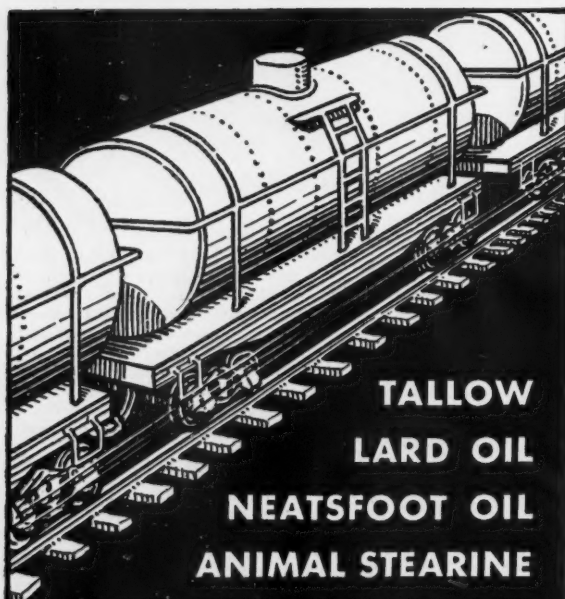
15%, 18% and 25% Frozen Tar Acid Oils with low benzophenol content. Natural oils of good uniformity, color and highest quality.

Send us your inquiries for tank cars and drums; also for Coal-Tar Solvents, Creosote and Termite Oils, and other Coal-Tar Products.

Samples
on
Request

THE NEVILLE COMPANY

PITTSBURGH • PA.



**TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL**

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.

Bridesburg P. O.

Philadelphia, Pa.

SHAVING CREAM

TOOTH PASTE

*In
Bulk
Or*

Under Your Own Name in our special tubes and cartons. These are lithographed with a blank space for *YOUR* label. In any quantity from one gross up.

GEO. A. SCHMIDT CO.

Manufacturers of **SOAPS** of Every Description

236-238 West North Avenue.
Chicago.

PYRETHRUM FLOWERS

by C. B. Gnadinger

- Recent developments in pyrethrum testing methods.
- Use of pyrethrum in live stock sprays and horticultural dusts and sprays.
- Control of pyrethrum decomposition by use of antioxidants.
- Data on production and new sources.
- Three hundred references to the literature.

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New York City

Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, page 141, for page numbers. "Say you saw it in SOAP."

ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

BULK AND PRIVATE BRAND PRODUCTS

Ampion Corporation (Soaps and Sanitary Chemicals)
Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Wax Products)
Chemical Mfg. & Dist. Co. (Soaps and Sanitary Chemicals)
Chemical Supply Co. (Disinfectants, etc.)
Clifton Chemical Co. (Soaps and Sanitary Chemicals)
Cole Chemical Corp. (Sanitary Chemicals)
Davies-Young Soap Co. (Soaps and Floor Wax)
Federal Varnish Co. (Wax Products)
Fuld Bros. (Soaps and Sanitary Chemicals)
James Good, Inc. (Sanitary Chemicals)
Harley Soap Co. (Soap Specialties)
Higley Chemical Co. (Floor Seal)
Hockwald Chemical Co. (Sanitary Chemicals)
Hysan Products Co. (Sanitary Chemicals)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
M. & H. Laboratories (Floor Waxes)
Pecks Products Co. (Soaps and Sanitary Chemicals)
Philadelphia Quartz Co. (Detergents)
Reilly Tar & Chem. Co. (Floor Seals)
Geo. A. Schmidt & Co. (Soaps)
Superior Soap Corp. (Soaps and Waxes)
Sweeping Compound Mfrs. Co. (Sweeping Compound)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Chemicals)
T. F. Washburn Co. (Wax Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Chemical Mfg. & Dist. Co.
John A. Chew, Inc.
Columbia Alkali Co.
Cowles Detergent Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.

Rohm & Haas Co.
Reilly Tar & Chemical Corp.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Mirvale Chemical Co.
Monsanto Chemical Co.
Neville Co.
Pittsburgh Coal Carbonization Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Interstate Color Co.
Pylam Products Co.
Tamms Silica Co.

CONTAINERS AND CLOSURES

American Can Co. (Tin and Fibre Cans, Steel Pails)
Anchor-Hocking Glass Corp. (Closures and Bottles)
Continental Can Co. (Tin Cans)
Crown Can Co. (Tin Cans and Steel Pails)
National Can Co. (Tin Cans)
Owens-Illinois Glass Co. (Bottles and Closures)
Williams Sealing Corp. (Closures)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hysan Products Co.

INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Associated Chemists, Inc.
Dodge & Olcott Co.
Rohm & Haas Co.
U. S. Industrial Chem. Co.
Whitmire Research Corp.

MACHINERY

Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
R. A. Jones & Co. (Automatic Soap Presses and Carbonizing Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc.)
Stokes & Smith Co. (Packaging Machy.)

CARNAUBA—

Direct Importers
of All Grades

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ALSO
BEESWAX
HIGH MELTING-POINT
PETROLATUM
JAPAN WAX
And Other Waxes

**DISTRIBUTING AND TRADING
COMPANY, INC.**

21 WEST STREET

NEW YORK, N. Y.

CRESYLIC ACID
...

HIGH BOILING
TAR ACIDS
...

TAR ACID
CREOSOTE OIL
...

NAPHTHALENE
...

MIRVALE CHEMICAL CO., Ltd.
MIRFIELD YORKS, ENG.



BREAK YOUR TRIP WITH A PLEASANT STOPOVER IN BALTIMORE

202 Common Household Pests of North America

by Hugo Hartnack

Just fresh from the press is this new text,—invaluable to the manufacturer of insecticides and the exterminator, dealing with common household insect pests. The contents total 352 pages, with some 300 illustrations.

\$3.75 Per Copy
Send Check with Order to

MacNair-Dorland Co.
254 W. 31st St. New York, N. Y.

Raw Material and Equipment Guide

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MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator and Mops)
Anchor-Hocking Glass Corp. (Metal Caps)
Barnsdall Tripoli Co. (Pumice and Tripoli)
Dow Chemical Co. (Germicides, Agricultural Insecticides, Fumigants)
Filtrol Corp. (Purifying and Decolorizing Clay)
General Petroleum Corp. (Naphthenic Acids)
Hercules Powder Co. (Pine Oil, Rosin, Ins. Activator)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Newport Industries, Inc. (Pine Oil and Rosin)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
Reilly Tar & Chem. Co. (Preservatives)
Steryl Prods. Corp. (Toilet Deodorizer)
Tamm's Silica Co. (Silica, Volcanic Ash, etc.)
Victoria Paper Mills Co. (Toilet Tissues)

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Eastern Industries
Emery Industries, Inc.
Independent Manufacturing Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLOROBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

PERFUMING MATERIALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
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General Petroleum Corp.
Pennsylvania Refining Co.
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General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

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Derris, Inc.
Dodge & Olcott Co.
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R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
Whitmire Research Corp.

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Philadelphia Quartz Co.
Standard Silicate Co.

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Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.
Presto Mfg. Co.

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Dula Manufacturing Co. (Electric Steam)
Fumeral Co. (Spraying Systems)

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...for pleasure?

IT'S our guess that trade and industrial magazines are rarely read for pleasure. People in the trade read them almost wholly for the information which they contain which can be of help *in their business*. In other words, they read them when they are *trade minded*, when they are thinking and planning in terms of their plants, products, equipment or raw materials.

Now isn't the logical time and place to advertise to a business man,—a buyer, owner, plant superintendent, chemist, etc.—when he is reading with an eye to his business?

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SOAP and Sanitary Chemicals
254 WEST 31st STREET NEW YORK

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Tale Ends

BY the newspapers, we see that the national debt limit has been raised to forty-nine billion dollars. Shades of Andrew Mellon! Remember back in the twenties when Andy cut the national debt several billion and taxes at the same time?

* * *

The surprising thing about this whole war situation as far as the United States is concerned is the quiet stability of most raw material markets, and the absence of the usual war-time gyrations.

* * *

The MEM line of toilet soaps and cosmetics, manufactured for many years in Vienna, and widely known in Europe, is now being produced in New York by members of the Meyer family, original owners, and refugees. So far they have turned out several very attractive toilet soap items.

* * *

Some American newspapers remind us of a jittery woman in a mouse infested house. Every time Hitler makes a new move, they become hysterical all over again,—just one case of hysterics after another.

* * *

When asked recently to give us a few words on the keen competitive situation in potash soaps, the president of a well-known Dayton soap company complied by stating: "Aw, nuts!"

* * *

Some government departments still believe in Santa Claus when it comes to purchasing liquid household insecticides.

* * *

The only place in captivity where all the recognized tests for evaluating insecticide materials, both chemical and biological, are published in one place and in up-to-the-minute form,—the 1940 *Blue Book*. If you do not have a copy, you can still get one without charge by entering a subscription now to *Soap and Sanitary Chemicals*.

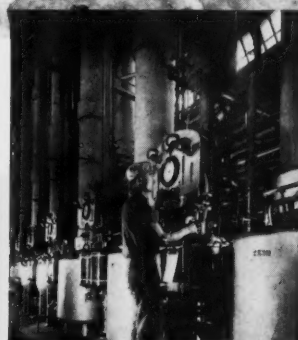
THE TURN of events during the past few weeks serves to emphasize forcibly the growth and importance of America's synthetic aromatic chemical and perfume raw material industry.

American consumers are far more independent of foreign sources than they were at the beginning of the last world war. In many lines they are completely independent—thanks to the constant pioneering efforts of the nation's chemists and manufacturers.

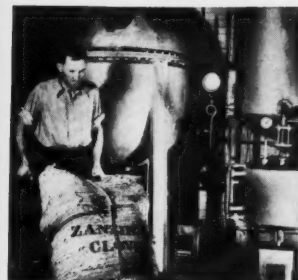
Yet there are some materials which are still obtainable only from special foreign sources—the Dutch East Indies, for example. Involvement in the war of



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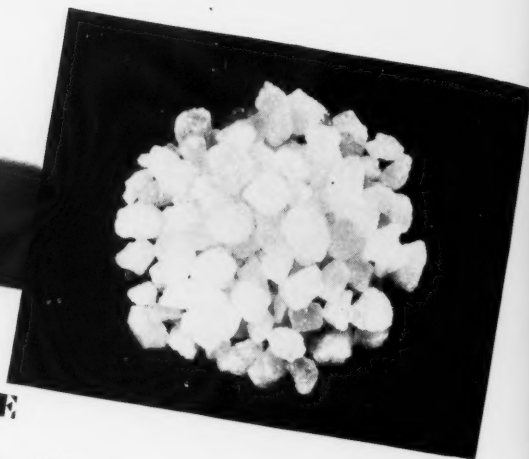
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